

**Science and Art Teaching Practices for Oregon Elementary Teachers:  
Results of a Landscape Survey**

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Evaluation Report for Oregon Department of Education

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# Introduction

In collaboration with classroom teachers and WRAP personnel we developed and implemented a survey to collect baseline data on the science and arts teaching practices for ALL elementary teachers. This included “regular” classroom teachers (those teachers with an assigned physical classroom and set of students), art teachers, music teachers, PE teachers and other educators or administrators.

In December 2022 we recruited three (3) elementary teachers to assist us in survey development, in particular framing questions around frequency of teaching time for both arts and science instruction. One important outcome was that we formulated questions around “dedicated” teaching time where instruction was only focused on science or art content and “integrated” teaching when teachers combine science or art with other instructional areas (such as math or literacy). We also learned that there was a lot of nuances in trying to capture the science and art teaching data; for example, some schools have large blocks of time when they have a particular focus on a science content area and then equally large blocks when science teaching is replaced by instruction in other fields, such as social science. It can be difficult to reduce this instructional framework to a weekly allotment of science teaching.

We advertised the survey in the May 8, 2023, WRAP newsletter with a reminder on 5/22/23. We kept the survey open until June 2, 2023. We asked questions about frequency, amount of time and why and how they chose how and what to teach. We asked all survey participants if their school had designated scheduling for science and arts and if they brought in specialists to teach science. We also asked about participation in science and arts professional development over the past year (see survey items in Appendix A4).

Figure 1 shows the geographic distribution of survey responses. There are a few items to consider for this map: 1) these locations are from where the teacher completed the survey and may not be the same or similar location of the school they teach; 2) not all responses included latitude and longitude data; 3) there were seven responses from outside of Oregon.

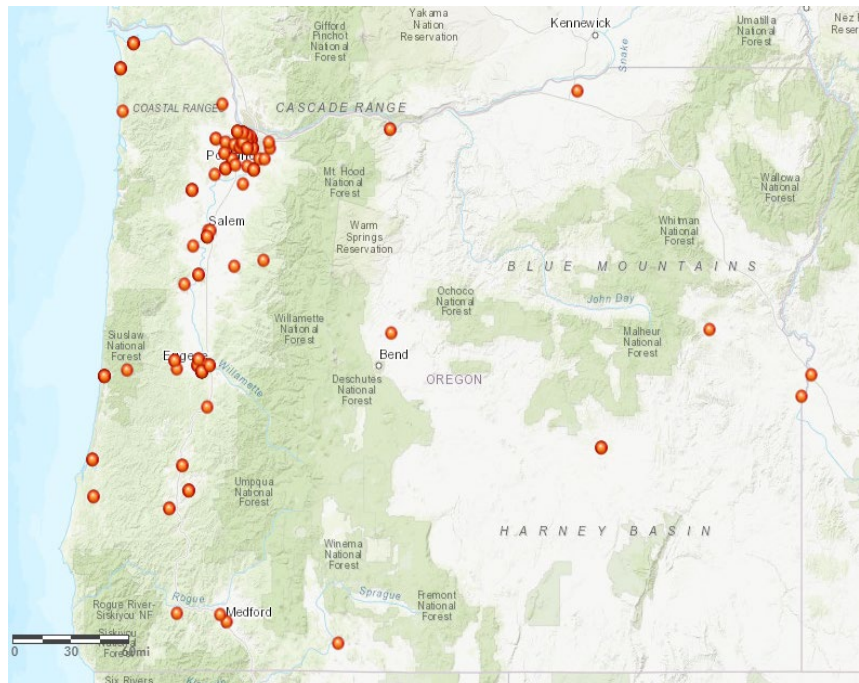


Figure 1

However, we chose to include the “out-of-state data” as these may have come from Oregon teachers who were in these areas when they completed the survey. The small number of these responses also do not significantly change any of our analysis, interpretations, or recommendations.

A total of 311 elementary teachers participated in the survey with 88% completing the survey. Over half of the participants were classroom teachers. Figure 2 indicates the educational role of each of the survey participants. The list of educators who identified as “other teachers” is detailed in Table 1.

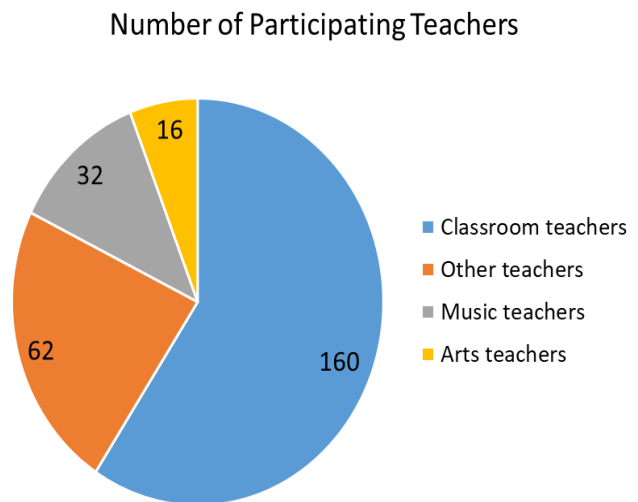


Figure 2

Table 1. Primary teaching responsibility for “other” teachers (n=51)	
Admin (Building leader, Dean Students) = 5	<u>Other:</u> <ul style="list-style-type: none"> <li>• Climate science</li> <li>• Coach and support</li> <li>• Drama-based STEM</li> <li>• Experiential Education Teacher</li> <li>• Math Honors</li> <li>• Teacher’s aid</li> <li>• Think Big Space Lead (STEAM Teacher)</li> <li>• Title I Service Coordinator and Provider</li> <li>• Retired or out of classroom (3)</li> <li>• Charter School administrator: I am an administrator/curriculum, instruction, and climate coach at a first-year charter school focused on changing the academic narrative for Black, Brown and Indigenous youth.</li> </ul>
ELD/ELL/Bilingual teacher = 5	
Instructional coach = 5	
Elementary Science Teacher/Specialist = 5	
Librarian = 3	
TOSA = 4	
SPED/Resource Teacher = 3	
Principal = 3	
School Counselor = 3	
SEL/Behavior safety = 3	

## Key Findings - Science Instruction

- Most (80%) of participating classroom teachers reported that science is part of their school's recommended teaching schedule. Nearly all (94%) of the participating classroom teachers reported that they teach science, either as a dedicated topic, integrated into other curriculum or both.
- Weekly science instructional time for classroom teachers is  $\leq 2$  hours, including both integrated and dedicated instructional time.
- 61% of music, 94% of arts teachers and 67% of other teachers integrate science into their instruction.
- Obstacles to teaching science include lack of teacher knowledge, the need to rotate science blocks with other topics, the focus of instructional time on reading and math, inadequate preparation time, lack of good materials, lack of funding, lack of collaboration time and lack of support from the district or principal.
- Most respondents have engaged in teacher professional development over the past year.

## Key Findings – Art Instruction

- 81% of art teachers and 52% of music teachers report that students receive 30-60 minutes of arts instruction each week. The average weekly instruction time is 58 minutes for art teachers and 60 minutes for music teachers.
- 76% of classroom teachers report that art is not part of the regular school schedule.
- 74% of classroom teachers teach art either as integrated into other topics, as a standalone, dedicated topic or both.
- Most classroom teachers teach 30-60 minutes per week of art instruction. The frequency of art instruction is variable, and the average weekly instruction time is between 49-58 minutes per week.
- Most other instructors teach art for less than 30 minutes and at various frequencies. Other instructors teach art on average 37 minutes/week.
- Both music and arts teachers integrate other art topics into their instruction. For music teachers, the most common crossover topics are dance, visual arts, and theater. For art teachers, music is the most integrated art topic.
- 78% of music teachers and 87% of arts teachers participated in professional development in the past year.

## Recommendations

The results suggest a variety of actions that could be taken to increase the frequency and amount of instructional time dedicated to science and arts teaching in elementary schools across Oregon.

- Promote PD opportunities that address the specific needs of elementary teachers. PD should focus both on providing resources and skills for teaching science in dedicated lessons as well as integrating science concepts into other subjects or disciplines. If such PD is currently unavailable, provide support for the development of appropriate opportunities in the future.
- Work with administrators to increase the amount of time available for science instruction.
- Promote to elementary teachers easily accessible and appropriate science curricula, especially resources that are available online.
- Given that 15 out of 16 of the arts teachers in our sample currently integrate science into their courses, there appear to be opportunities for ODE to consider the addition of science concepts to the Arts courses and PD they are currently promoting as part of the WRAP Program.

## Limitations

Although we were generally encouraged by the returns of the survey, the number is still small compared to the total number of Oregon elementary teachers and therefore, our conclusions and inferences may not be representative of this larger group. Further, since the survey was about science and arts instruction this may have produced a bias of who completed the survey; it may have been those teachers who already enthusiastically teach science or art. The calculations of both art and science instructional time should be taken as very rough estimates since they were derived from teacher estimates that involved choosing ranges rather than absolute times. We have some confidence in the values for science instruction as they are like previously reported science instructional times for Oregon.

## Science Instruction Results

In this section we present findings about science instruction frequency, instructional time, content, resources, and challenges as reported by participating elementary school teachers.

### *Science Instruction Type and Frequency:*

- 80% of classroom teachers reported that science is on the school schedule (central circle on Figure 3)
- We separated science instruction time for classroom teachers into four categories: teachers who did not teach any science; teachers who only taught science as integrated into other topics; teachers who only taught science as a dedicated topic and teachers who did both, integrated science into other topics and had a dedicated instructional time for science (Figure 3).

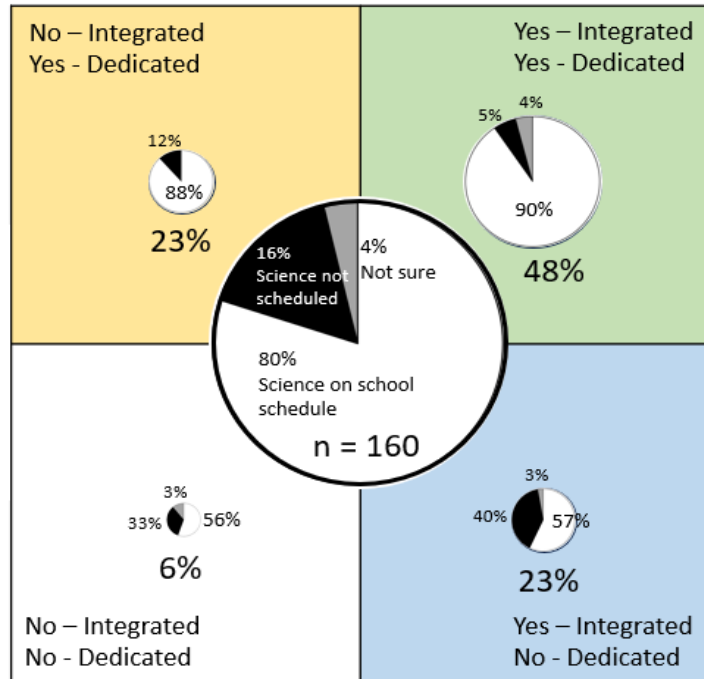


Figure 3

- 6% of teachers responded that they did not teach science as either integrated with other subjects or as a dedicated topic. Teachers in this group report that 56% of the schools have science as a scheduled topic and 33% do not schedule a science teaching time for the school. Teachers provide the following reasons for NOT teaching science despite it being part of the schedule:
  - “Science time is rotated with health and social studies through the year. My district mostly cares about core curriculum and the people in charge don’t believe in integration.”
  - “Time needed to prep lessons of the curriculum, our curriculum is very time intensive.”
  - “Insufficient time to plan and prepare materials.”
  - “I love teaching science, but I also am required to teach social studies, health, and SEL during rotating content time. Teachers have a million requirements put on them for minutes that must be met.”
  - “Terrible materials and outdated curriculum”

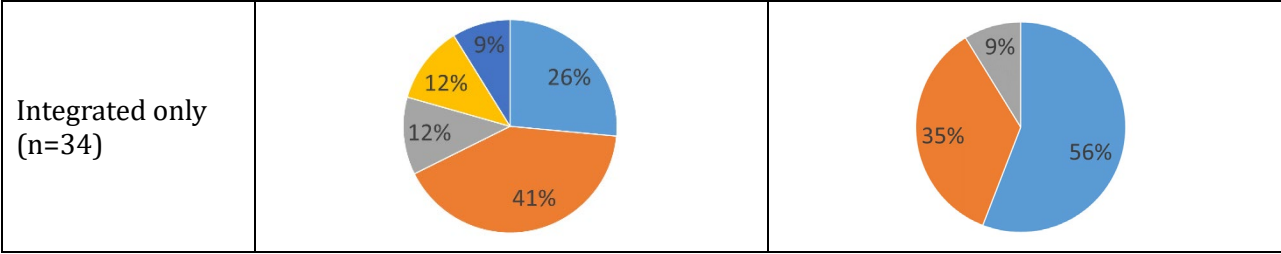
For the three teachers from schools without science on the schedule, reasons for not teaching science included



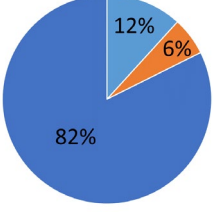
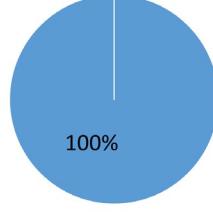
- “because i don't know science?”
- “Need more Science funding for teachers”
- “No curriculum or materials provided. Not encouraged by the district or principal.”
- 23% of teachers responded that they taught science as a dedicated topic and 88% reported that they taught at schools where science was part of the daily schedule; therefore, in this population some of the teachers still taught science as a standalone topic despite it not being part of the school schedule.
- 23% of teachers responded that they taught science as integrated into other topics. 40% of these teachers responded that science WAS NOT part of the daily schedule. Again, some teachers who teach at schools that do not have science in the schedule engaged their students in science learning by integrating science into other topics. Interestingly, 57% of teachers in this category work at schools where science is part of the schedule, yet they report they only teach science as an integrated topic.
- The fourth category of teachers is those who teach science both as a dedicated topic AND integrated into other parts of their curriculum. 48% of the surveyed teachers are in this category and 90% of them teach at schools where science is part of the regular teaching schedule.
- Table 2 contains pie charts for the frequency and amount of science instruction time for each of the four types of classroom teachers, as shown in Figure 3). One possible organization scheme is separating both data sets into high, moderate, and low frequency amounts. For teaching frequency, we chose to identify high frequency when the combination of each day (blue) and 2-3 times per week (orange) was greater than 50%; moderate frequency when the sum was 40-50% and low when the frequency sum was less than 40%. We used the same distribution for the amount of instructional time where the sum of the 30-60 minutes and greater than 60 minutes categories was either >50% (high), 40-50% (moderate) and <40% (low).
  - For teachers who use both dedicated and integrated instruction, their frequency and amount of instruction time is high for all categories. This means that these teachers frequently teach science as a dedicated topic AND integrate into other topics frequently and for a “high” amount of time. There is a hint that these classroom teachers teach more frequently in a dedicated format but spend more time teaching science integrated with other topics. However, the percentage differences are small and may not be significant. Several classroom teachers in this group reported that science is taught on a rotating schedule with health and social studies and that integration was dependent on the reading topics. For example, one teacher reported “we have an ELA unit about the impact of change in the weather on fall plants, animals, and people. Science was integrated daily during this unit.”

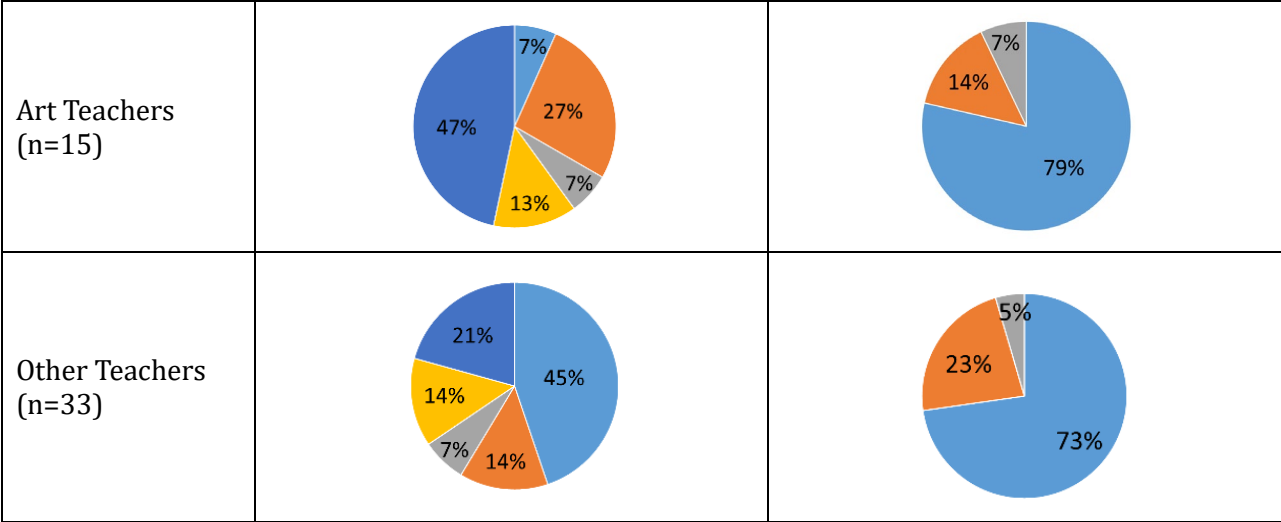
- For classroom teachers who teach science only as a dedicated topic their frequency is moderate, but the amount of time is “high”. In this group, some teachers report that they teach up to 120 minutes during their science day, but no science at all the rest of the week. Two teachers noted that they teach science units at specific times during the year and otherwise do not teach science.
- For classroom teachers who teach in an integrated manner, their frequency is high, but the amount of time is “moderate”. In this group, few teachers (9%) reported science instruction times greater than 60 minutes. The high frequency and low amount of instruction time makes sense for this group; they may integrate science across different topics but only spend a small amount of time during this instruction.

Table 2. Frequency and amount of time for science instruction for classroom teachers		
	Frequency	Amount of Time
	<ul style="list-style-type: none"> <li>■ Each day</li> <li>■ 2-3 times per week</li> <li>■ 1 time per week</li> <li>■ Every other week</li> <li>■ Other</li> </ul>	<ul style="list-style-type: none"> <li>■ &lt; 30 minutes</li> <li>■ 30-60 minutes</li> <li>■ &gt; 60 minutes</li> </ul>
<b>Dedicated &amp; Integrated</b> (n=71)		
<b>Dedicated &amp; Integrated</b> (n=71)		
<b>Dedicated only</b> (n=34)		



- Table 3 contains pie charts for the frequency and amount of instructional time for music, art, and other teachers.
  - 61% of music teachers integrate science into their instruction but do this in a limited manner: low frequency and a small amount of time. Music teachers listed several obstacles to science integration including the large amount of music topics to cover in a limited time, lack of good curriculum, lack of collaboration and insufficient administrative support. One teacher noted – “Music IS science” and identified physics as a topic they commonly integrate into their music instruction. This is encouraging.
  - 94% of surveyed art teachers integrate science into their instruction. As with music teachers the frequency and amount of instructional time for integration is low. We did not receive any written comments from arts teachers.
  - 67% of teachers who identified as other types of teachers report that they have opportunities to integrate science in their work with students. The data indicates that these teachers have a higher frequency of integration but do not spend a lot of instructional time, typically less than 30 minutes. Comments from these teachers included they integrate “when they can”, “when there is time” and “as needed when collaborating with classroom teachers”. This data for other teachers included input from 8 teachers who are STEM or STEAM specialists, which may explain the high frequency (45% teach science each day) and higher amount of instructional time (23% teacher 30-60 minutes and two teachers report instruction time of up to 240 minutes).

Table 3. Frequency and amount of time for science instruction for music, art, and other teachers		
	<p>Frequency</p> <ul style="list-style-type: none"> <li>■ Each day</li> <li>■ 2-3 times per week</li> <li>■ 1 time per week</li> <li>■ Every other week</li> <li>■ Other</li> </ul>	<p>Amount of Time</p> <ul style="list-style-type: none"> <li>■ &lt; 30 minutes</li> <li>■ 30-60 minutes</li> <li>■ &gt; 60 minutes</li> </ul>
<p>Music Teachers (n=17)</p>		



- Figure 4 is a histogram of the frequency of science instructional time for each of the classroom teacher categories shown in Figure 2. For time estimates we approximated the category of less than 30 minutes to 30 minutes, 30-60 minutes to 60 minutes and only used data for greater than 60 minutes when the teacher provided a number. The average weekly instructional time was 115 minutes/week for the teachers who had both integrated and dedicated teaching time, 72 minutes/week for teachers with just dedicated time for science topics and 49 minutes/week for those teachers who only taught science through integration with other topics. For all classroom teachers, >80% of them teach less than 2 hours of weekly science instruction.

**Total Weekly Time Teaching Science  
Classroom Teachers**

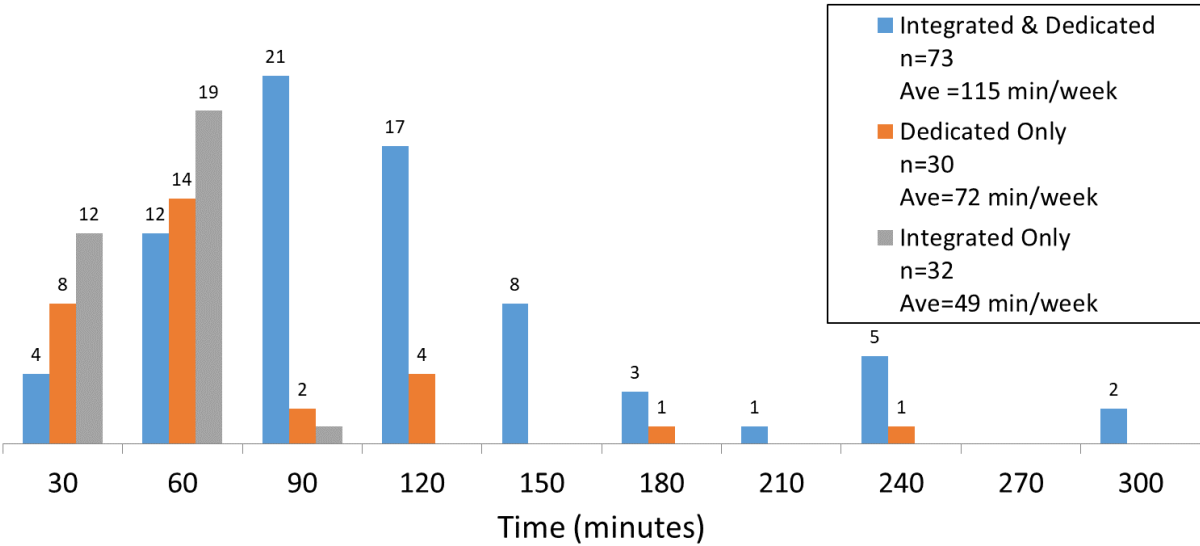


Figure 4

- Figure 5 is a histogram of the frequency of science instruction for art, music and other teachers using the same framework as figure 4. Clearly, most of these teacher spend <30 minutes integrating science instruction in their teaching, The teachers who spend 30-60 and 240 minutes of instruction are STEM or STEAM specialists.

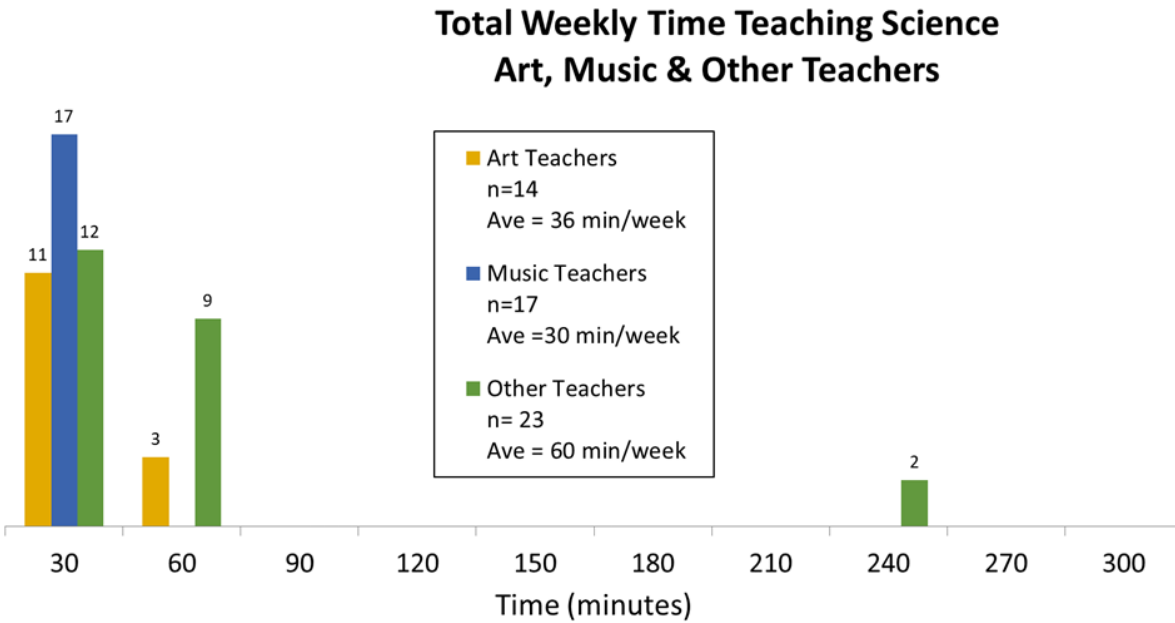


Figure 5

## Science Instruction Content

### Classroom Teachers

- Figure 6. Classroom teachers report that the main subject where they integrate science is reading, followed by health topics, math, arts, and social studies. A very small number of teachers integrate science into writing.

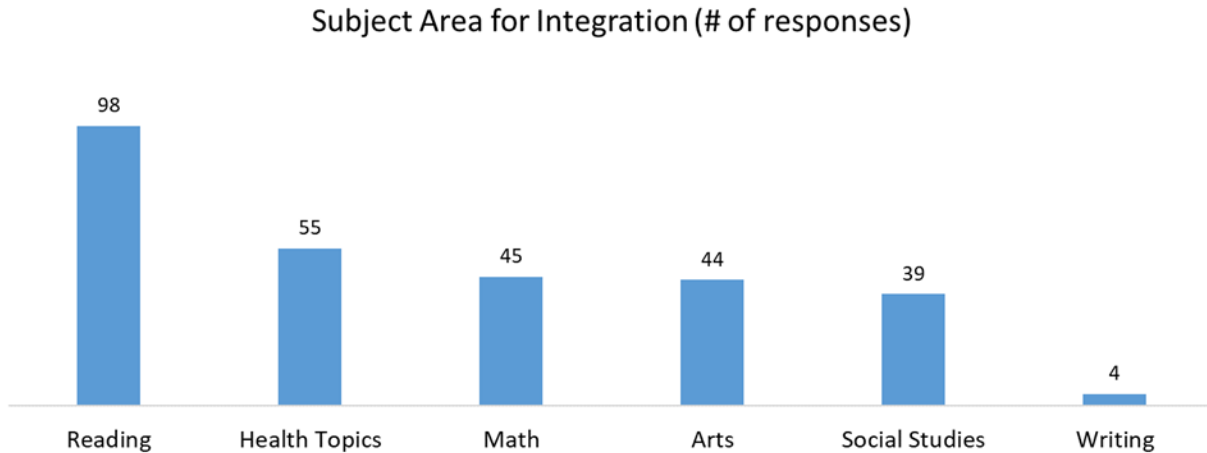


Figure 6

- Figure 7. Earth-related science topics including earth science, nature/environmental topics and weather and climate are the three top choices for the topics that classroom teachers teach and accounted for 47% of all the choices. Health, biology, and engineering had similar numbers of responses while astronomy, physics and chemistry were the final three categories.

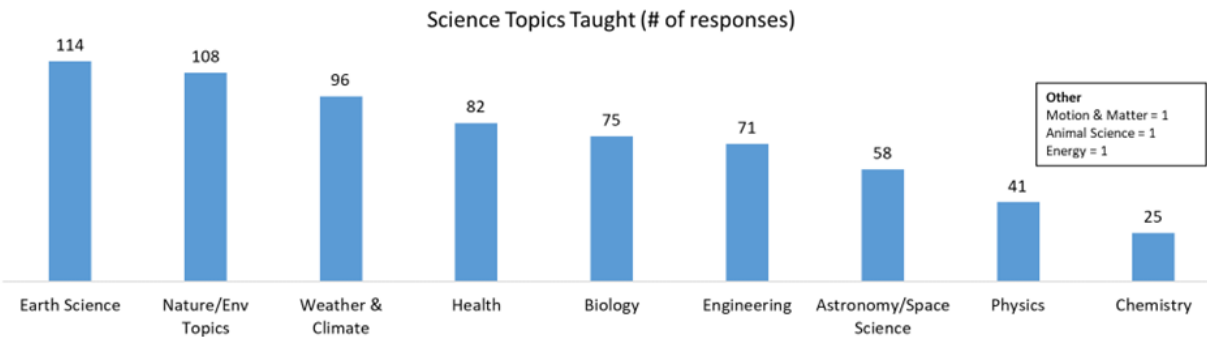
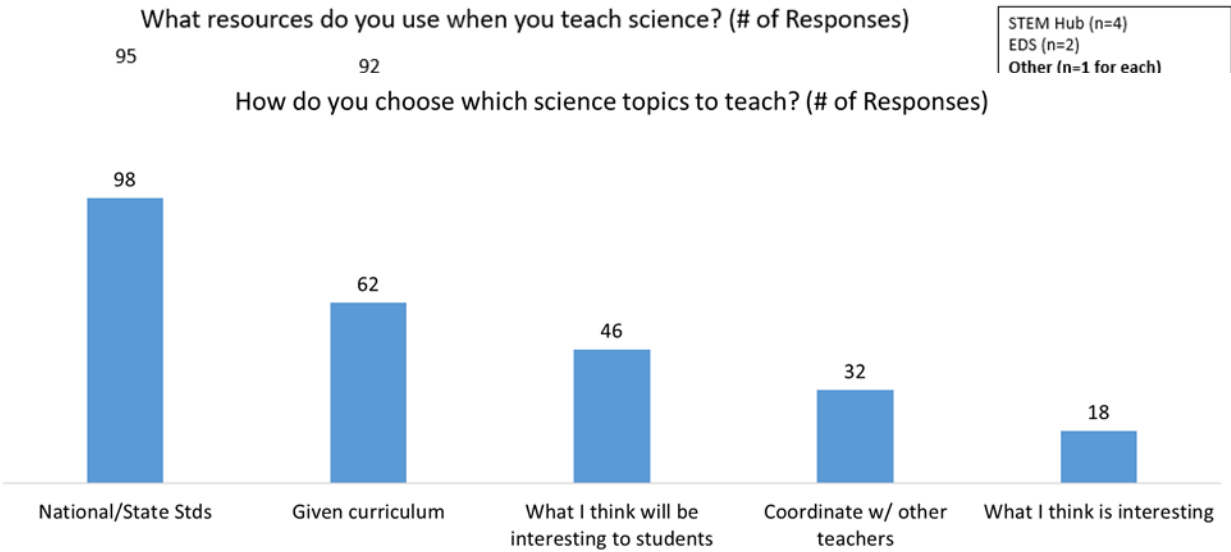


Figure 7

- Figure 8 shows the number of responses for what resources classroom teachers use for their instruction. Nearly equal amounts of teachers use internet resources and curriculum provided by the school or school district. Some classroom teachers develop their own and fewer indicated that they relied on teachers from or outside of their school for curriculum



- Figure 9. What guides their classroom teachers' instruction choices? The most common response when asked how they choose the science topics to teach was that they relied on national or state science standards. Some teachers indicated that they were guided by the given curriculum and significantly fewer chose the option of what they think will be interesting to the students, that they coordinated with other teachers and what they think is interesting.

### Music and Art Teachers

- Figure 10 shows the science topics that music and arts teachers integrate during their instruction. As with classroom teachers, art teachers most frequently choose earth-related topics with 54% of the responses in the earth science, nature topics and weather and climate areas. Earth-related topics were followed by engineering, astronomy, biology, health, physics and lastly chemistry. For music teachers, earth-related topics were still high constituting 36% of the total. Interestingly, physics by itself was 21% of the total. There were lower values for astronomy, health, biology, engineering, and scientific methods.

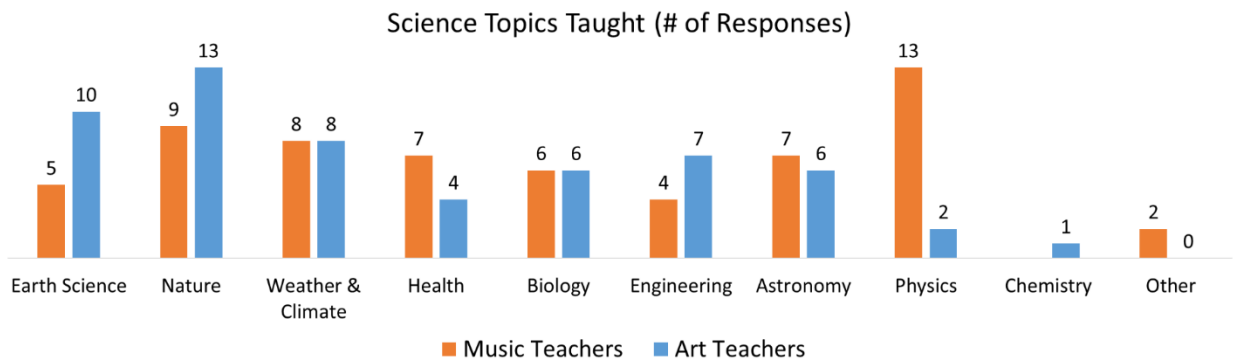
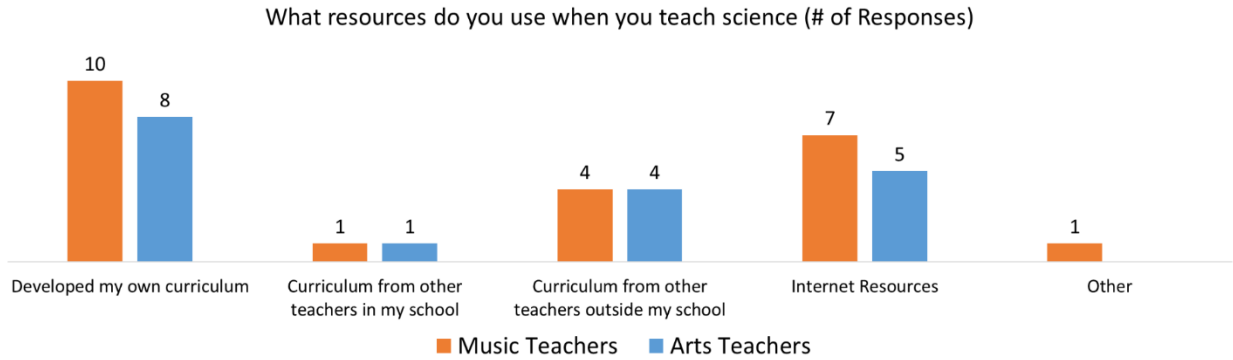


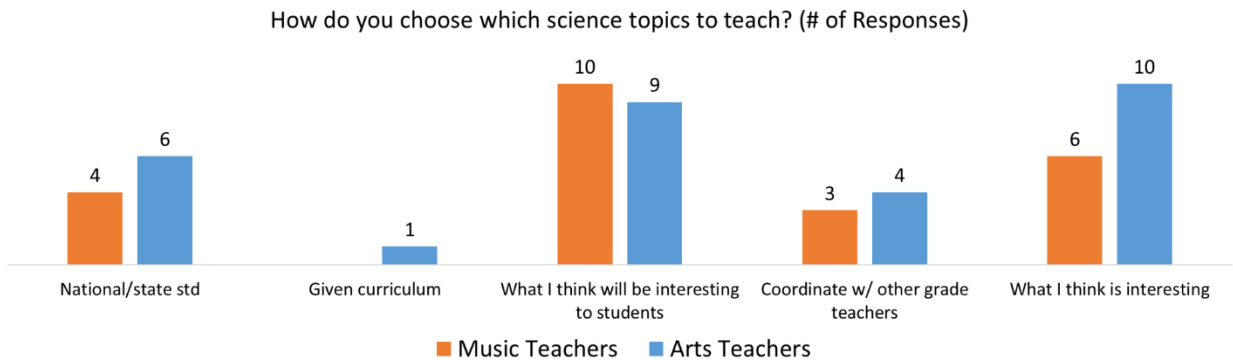
Figure 10

- Figure 11 shows the resources music and arts teachers used to integrate science into their teaching. Compared to classroom teachers (who relied on standards and curriculum provided by the school or district) music and art teachers showed a preference for developing their own



curriculum (43% of responses for music and 44% of responses for arts) and, similar to classroom teachers, internet resources (30% of responses for music and 28% responses for art). Music and art teachers also relied on curriculum from teachers outside their schools more than from inside their schools.

- How arts and music teachers choose what to teach also differed from classroom teachers (Figure 12). For music teachers, 43% of the responses were in the category “What I think will be interesting to students” and 26% “What I think was interesting”. For arts teachers, the most common response was “What I think is interesting” (33%) followed by “What I think is interesting to students (30%). So, in sum, 50-70% of the choices were about interest of the



teachers and students. The next most abundant category was standards followed by coordination with other grade teachers and one response related to given curriculum.

Figure 12



## Other Teachers

- Related to science topics (Figure 13): as with the other groups of teachers, earth-science related topics constitute a large portion of other teachers' choices (43%), followed by health, astronomy and physics, biology and finally chemistry.
- For resources that other teachers use (Figure 14) - like music and art teachers this group of teachers also rely on the internet and develop their own curriculum. There were a few responses for getting curriculum from other teachers inside and outside of their schools.

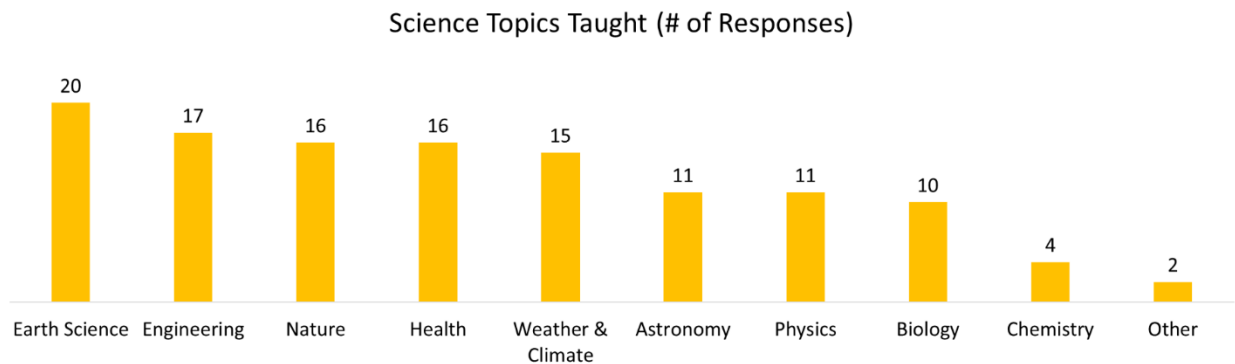


Figure 13

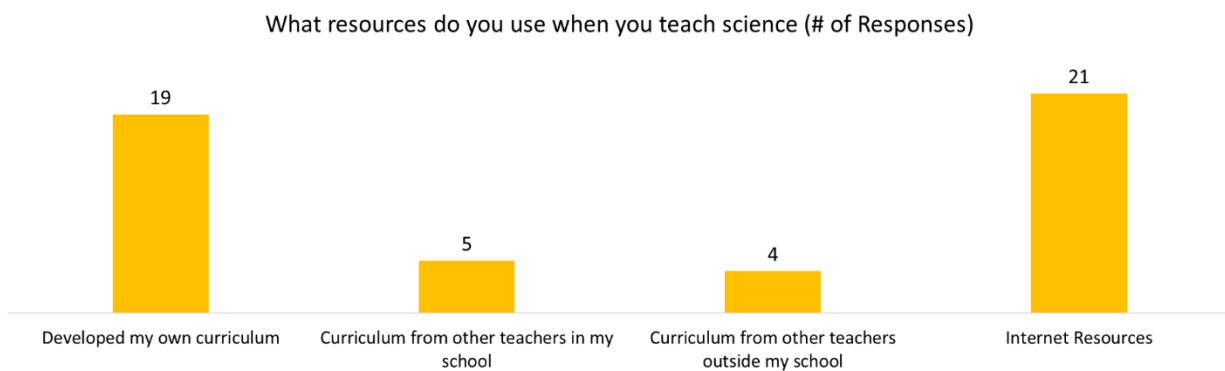


Figure 14

- Other teachers reported that they rely nearly equally on national or state standards and what they think will be interesting to students to determine what science subjects they integrate into their work with students. These two categories are followed by coordinating with other teachers, what they think is interesting and using provided curriculum (Figure 15)

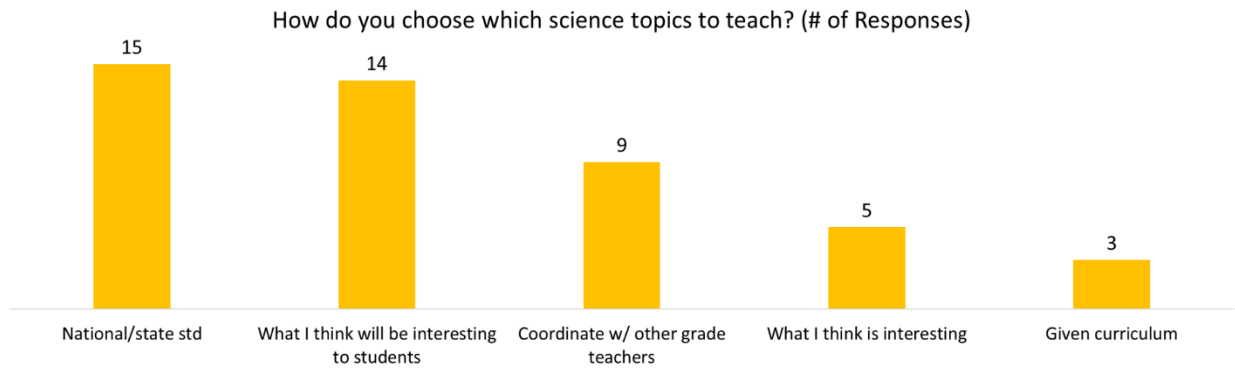


Figure 15

## Art Instruction Results

In this section we present findings about science instruction frequency, instructional time, content, resources, and challenges as reported by participating elementary school teachers.

### *Art Instruction Type and Frequency*

- Table 4 shows pie charts for time students receive pull-out art instruction as reported by art and music teachers. The most common time for each group was 30-60 minutes. For music, the other category includes times ranging from 75 to 85 minutes. One teacher noted that students receive up to 200 minutes for 4<sup>th</sup> grade and 90 minutes for 5<sup>th</sup> grade, but these are not pullout but occur outside of school time. One art teacher reported that students receive 1.5 hours per week.

Table 4. Time students receive pull out arts instruction in your art area		
	Arts Teachers (n=14)	Music Teachers (n=29)
<ul style="list-style-type: none"> <li>■ 30-60 minutes</li> <li>■ Less than 30 minutes</li> <li>■ More than 60 minutes</li> </ul>		

- 24% of classroom teachers reported that art teaching was part of the teaching schedule for classroom teachers and 38% indicated they have dedicated time in their schedule for teaching just art topics.

- Figure 16 shows details about classroom teacher art instruction.

- As shown by the large circle in the middle of the diagram, 76% of the schools do not have art as part of the daily school schedule.
- 26% of the classroom teachers reported that they do not teach art in their classrooms, and all the schools at which they teach do not have art on the schedule.
- 37% of the classroom teachers integrate art into their instruction despite most of the schools (82%) not including art in the regular teaching schedule.

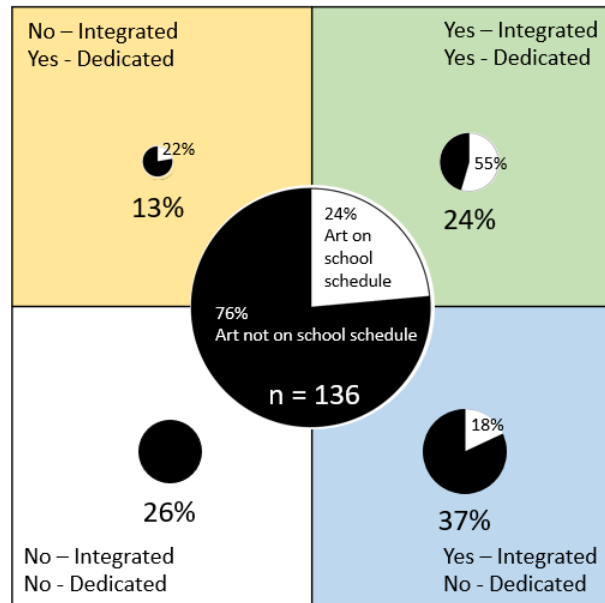


Figure 16

- 13% of the teachers have dedicated art time and for these classroom teachers 78% of the schools do not have a set time for art.
- 24% of the teachers find time to both integrate art into other topics AND teach art as a dedicated topic. 55% of these teachers work at schools that include art as part of their daily schedule.

- Table 5 contains pie charts for the frequency and amount of time for arts instruction reported by classroom teachers.
  - If we use the same convention for evaluating the frequency and amount of time employed for science instruction all classroom teachers except those that integrate only have relatively high frequency of art instruction and teach art for greater than 30 minutes per week.

Table 5. Frequency and amount of time for art instruction for classroom teachers		
	Frequency	Amount of Time
	<ul style="list-style-type: none"> <li>■ Each day</li> <li>■ 2-3 times per week</li> <li>■ 1 time per week</li> <li>■ Every other week</li> <li>■ Other</li> </ul>	<ul style="list-style-type: none"> <li>■ 30-60 minutes</li> <li>■ Less than 30 minutes</li> <li>■ More than 60 minutes</li> <li>■ Other</li> </ul>
<b>Dedicated &amp; Integrated</b> (n=33)		
<b>Dedicated &amp; Integrated</b> (n=33)		
<b>Dedicated only</b> (n=18)		
<b>Integrated only</b> (n=50)		

- Table 6 contains pie charts for frequency and amount of time for art instruction by other teachers.
  - The frequency for art instruction is relatively low and for the “other” category the responses included one week a month, depends on the project, when time allows and a few times a year – there were no comments indicating that these teachers spent a lot of time integrating art into their instruction.
  - The amount of time was also low – 73% of respondents indicated they spend less than 30 minutes integrating art. The one >60-minute response indicated that the amount of time depended on the project but when they engage in art projects they spend at least an hour a day on the project.

Table 6. Frequency and amount of time for arts instruction for other teachers		
	Frequency	Amount of Time
	<ul style="list-style-type: none"> <li>■ Each day</li> <li>■ 2-3 times per week</li> <li>■ 1 time per week</li> <li>■ Every other week</li> <li>■ Other</li> </ul>	<ul style="list-style-type: none"> <li>■ &lt; 30 minutes</li> <li>■ 30-60 minutes</li> <li>■ &gt; 60 minutes</li> </ul>
Other Teachers (n=22)		

- Integration of other art topics. 93% of music teachers and 40% of arts teachers responded that they integrate other art topics into their regular art instruction.
  - Figure 17 shows the subject that art and music teachers integrated into their regular instruction.

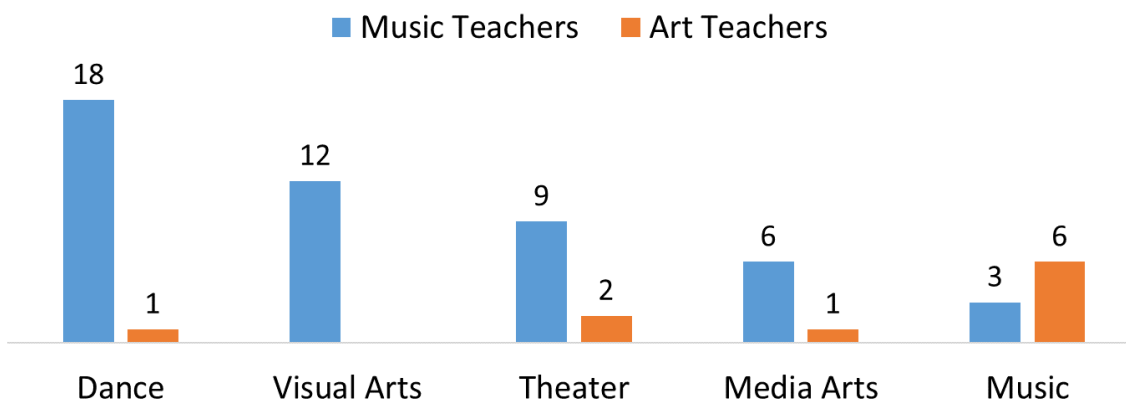


Figure 17

- Pie charts for the frequency and amount of time that art teachers integrate other art topics into their instruction is shown in Table 7. Note that some teachers do this quite frequently (each day) but, in general for small amounts of time (most less than 30 minutes). The written responses by art teachers included less than once a month, four times per year and it depends on the topic. Other responses written by music teachers include one every two months, intermittently or when possible, dance/movement daily and art when linked to the music or composer,

every week for elementary music and 1-3 times per year for band, and a few times per semester.

Table 7. Frequency and amount of time that art and music instructors integrate other arts into their instruction		
	Frequency	Amount of Time
	<ul style="list-style-type: none"> <li>■ Each day</li> <li>■ 2-3 times per week</li> <li>■ 1 time per week</li> <li>■ Every other week</li> <li>■ Other</li> </ul>	<ul style="list-style-type: none"> <li>■ &lt; 30 minutes</li> <li>■ 30-60 minutes</li> </ul>
Music Teachers (n=25)		
Art Teachers (n=6)		

- In calculating time spent in art instruction we used the same conventions that were employed for science instruction: <30 minutes = 30 minutes' 30-60 minutes = 60 minutes; and other = minutes provided by the teacher. Figure 18 shows the distribution of art instruction minutes for art and music teachers; the average for art teachers was 58 minutes per week and for music teachers 60 minutes per week. There was only one value >90 minutes and most were between 30 and 60 minutes for both art and music teachers.

## Total Weekly Time Teaching Art Music and Art Teachers

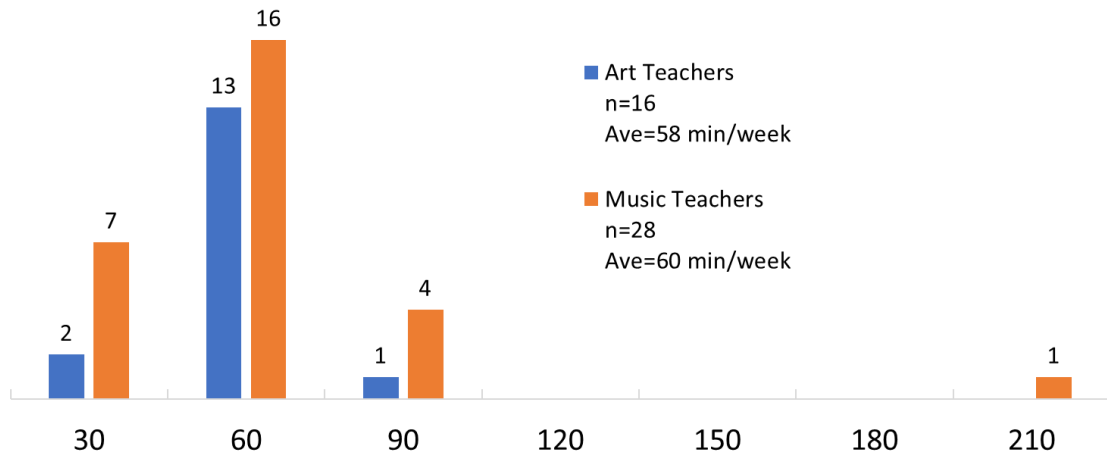


Figure 18

- Figure 19. The average of “other” teachers was 37 minutes/week and most of the responses were in the less than 30-minute range. For classroom teachers, those teachers that reported they have a dedicated time for art teaching taught on an average of 58 minutes/week whereas those who taught art as integrated into other topics averaged 49 minutes/week. There was a total of seven classroom teachers who taught for more than 60 minutes/week.

## Total Weekly Time Teaching Art All Teacher Categories

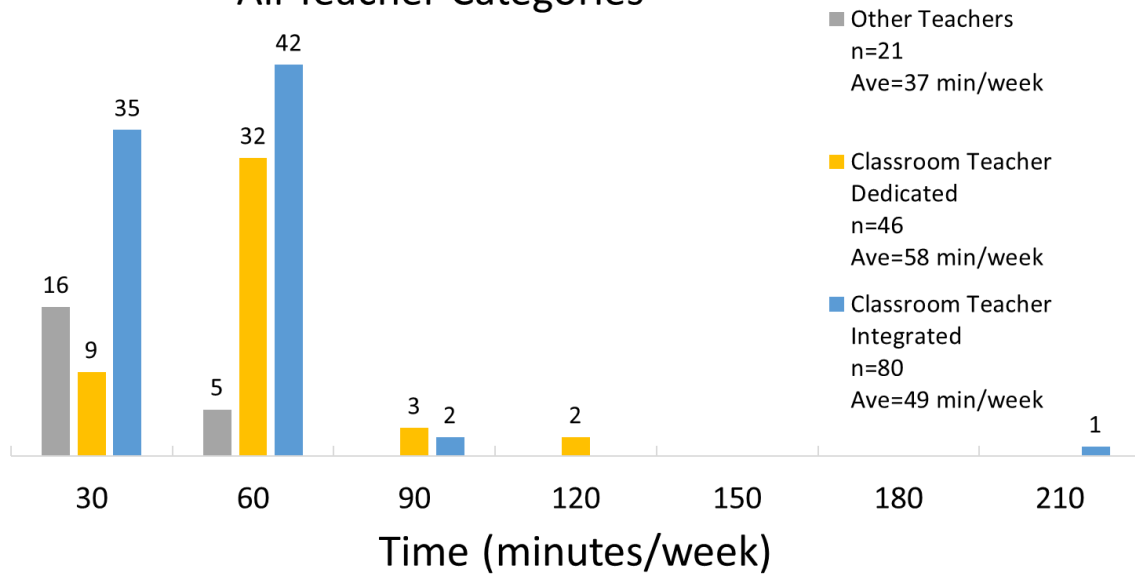


Figure 19



# APPENDIX A1

## ELEMENTARY CLASSROOM TEACHER SURVEY RESULTS

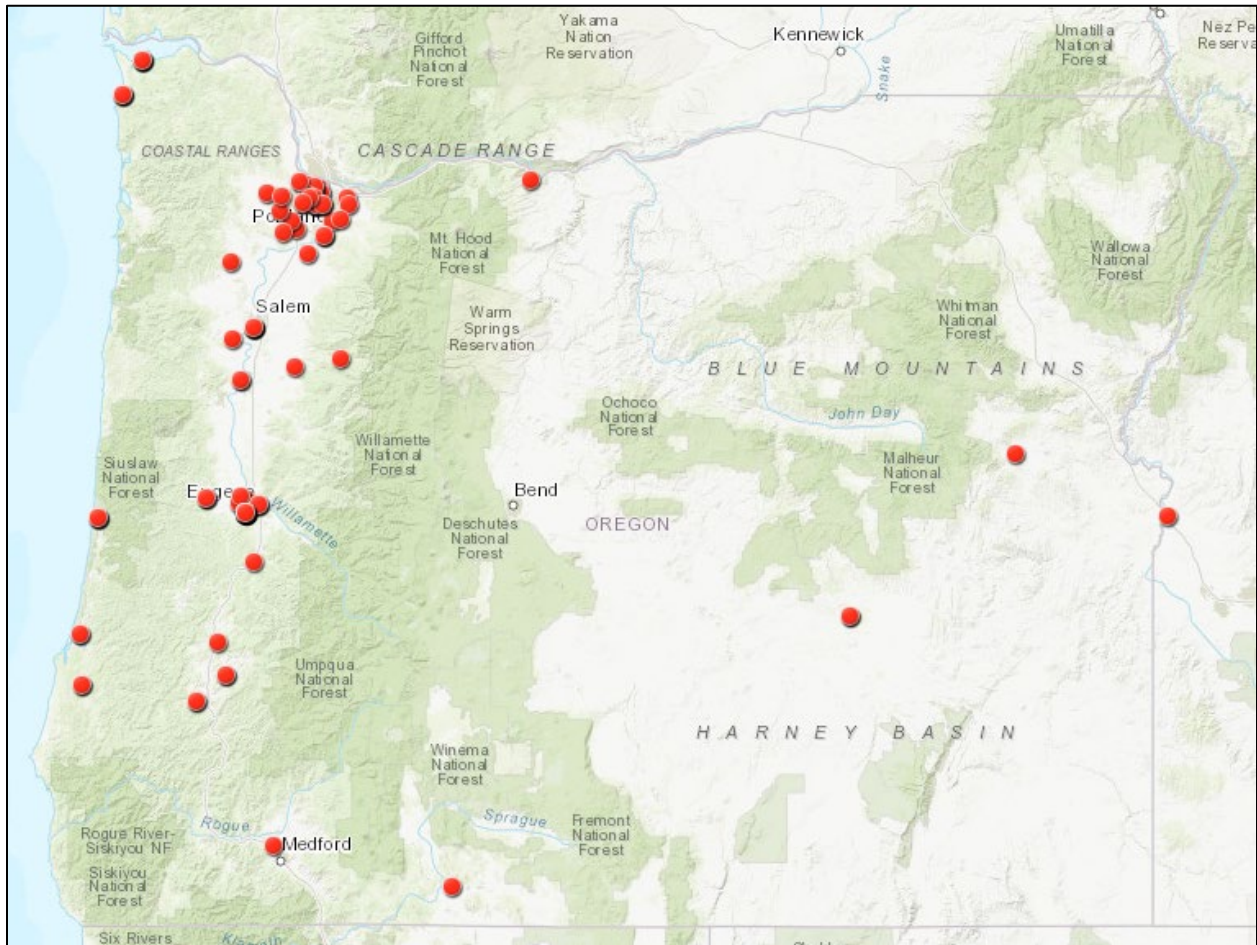
### SURVEY DATA DETAILS

#### Response rate

- 164 total responses
- 25 partial responses
- 4 started surveys but did not register any answers
- 135 totally complete responses

#### Survey locations

These are locations where participants completed the survey and may not be school locations. There were two responses from the Seattle area, one from the Salt Lake City area, and one from Stockton, CA.



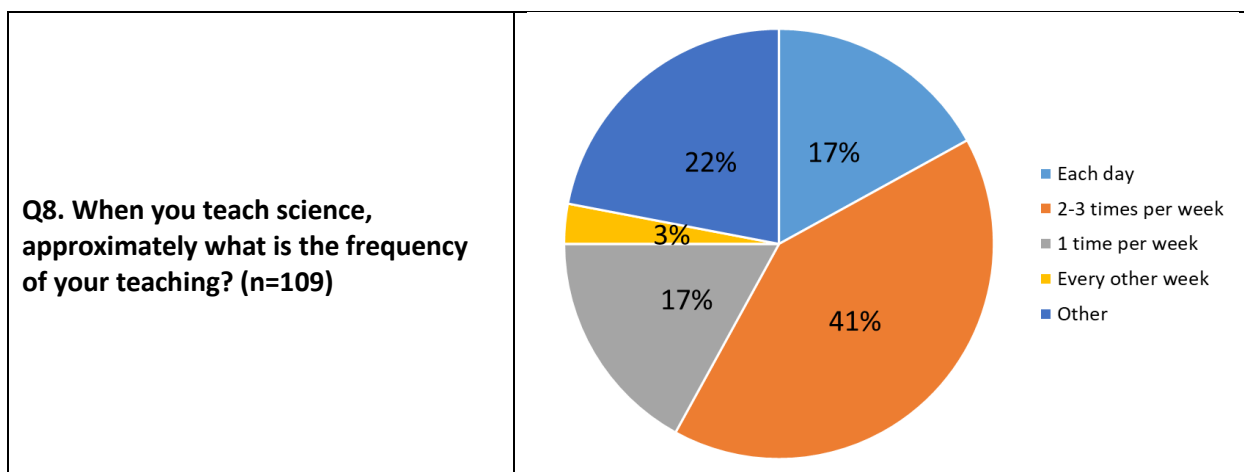
### SCHOOL SCIENCE POLICIES

<b>Q4. Is science teaching part of your school's recommended teaching schedule? (n=160)</b>	Yes = 80%	No = 16%	Not sure = 4%
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<b>Q5. Do other professionals come to your school to teach science? For instance, instructors from a STEM Hub or business/industry professionals. (n=160)</b>	Yes = 16%	No = 79%	Not sure = 5%
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### CLASSROOM SCIENCE TEACHING QUESTIONS

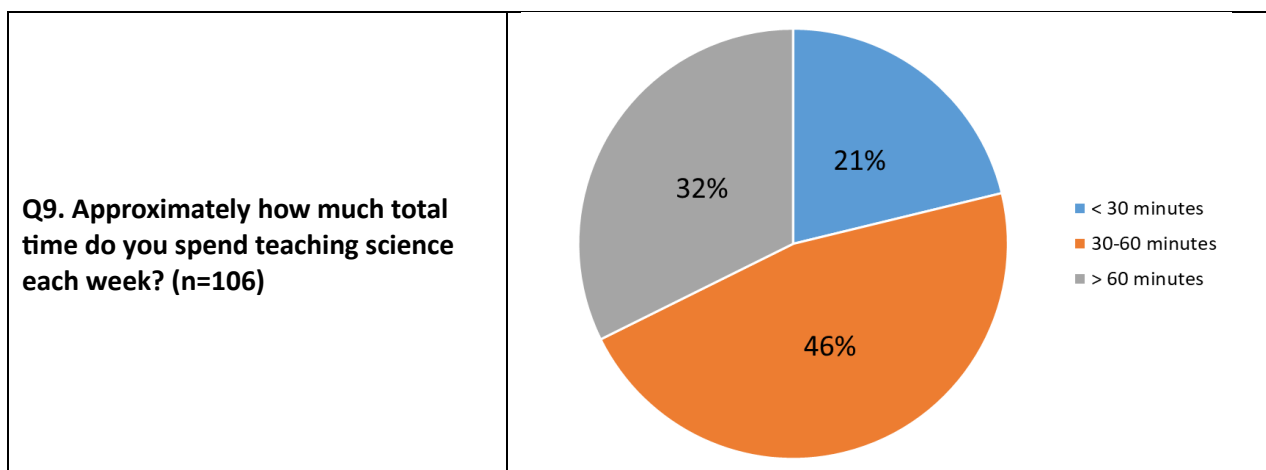
<b>Q7. During your teaching this past year, did you have dedicated time in your schedule for teaching just science topics? (n=156)</b>	Yes = 72%	No = 28%
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Other:

- I fit it in where I can. There is only a 20-minute-long place in the schedule for teaching 3 subjects: science, social studies, and health. This means I have to trade off time, so some weeks I teach science every day, and then the next week not at all.
- 6-8 weeks per year
- It rotates with Social Studies and Health, so 3 times a year for 5 weeks at a time
- Our time block alternates between science, social studies, and health, so we rotate units between these subjects.
- 2x a week, 1 month on, one month off, Rotating schedule with social studies. But 10-minute quick lessons 2x a week, every week.
- 2-3 times per every other week

- I try and teach 2 units a year that are around 10 lessons, so maybe 20-30 total science lessons for the year. It is a subject that gets cut often when other things come up or is rotated with social studies, art.
- There is not enough time - it can vary
- I attempt to integrate, otherwise there would be no time, due to new literacy adoption and book groups.
- It varies based on ELD coteaching
- We rotate between Science and Social Studies units, teaching one of those each day (4-5 days per week).
- Try 1-2 times a week but is put to the side a lot to do reading
- Every day for 3-4 weeks in a rotation cycle with health and social studies
- Rotates throughout the school year with social studies and health units but when I do teach science it's every day until the unit is complete
- 4 days per week for a 4–6-week unit. Units rotated with health and social studies. There is not enough time
- We are on a forced, rotating schedule. So when Science is part of the schedule, we have to teach Science every day for up to 3 weeks. Not my preferred way to teach science!!!
- 2-3 times per week for 3 months of the year, with the rest of the year the time rotating for Health and Social Studies
- Taught in units 2-3 times a week for several weeks during the unit. When not teaching science I teach health or SS during that time
- Once a quarter, so four times a year
- Short units of study throughout the year
- 3-4 days during the science rotation
- We have three units during the year devoted to science: Earth's Systems and Matter (two weeks), Fall Botany, and Spring Botany (each four weeks long).



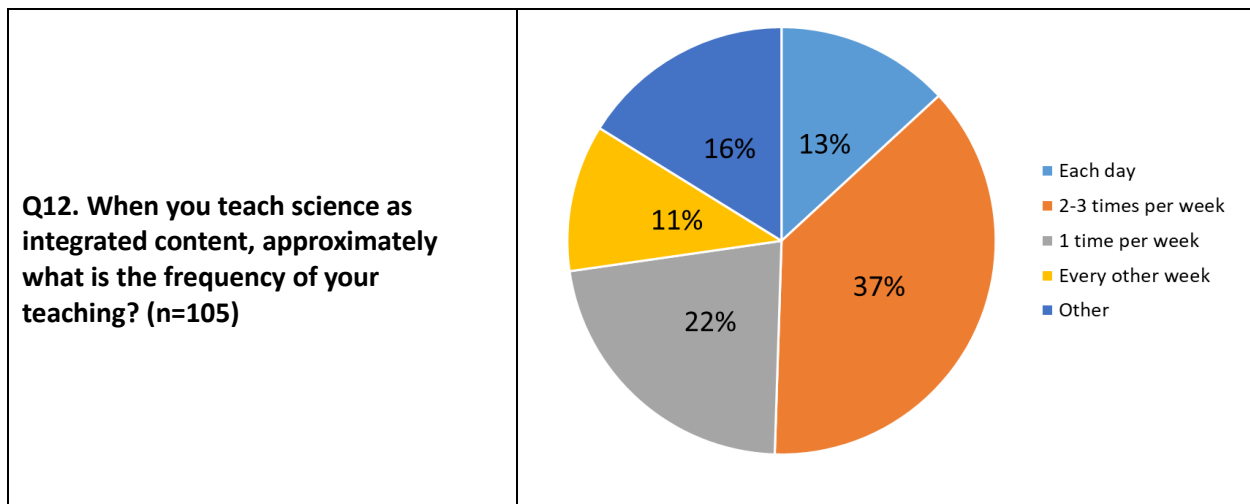
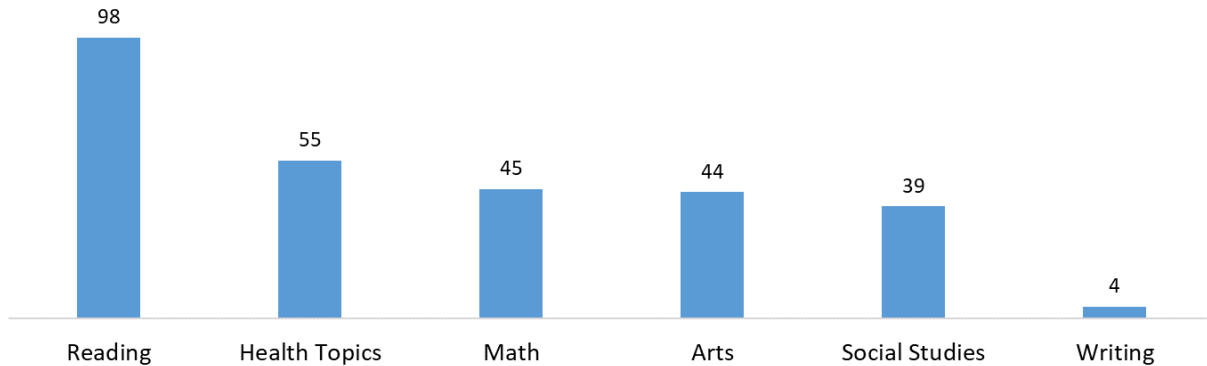
>60 minutes includes:

60 minutes 80 minutes 90 minutes (4) 85 minutes 100 minutes	105 minutes 120 minutes (7) 165 minutes 180 minutes (4) 225 minutes	60-90 minutes 80-120 minutes 90-120 minutes (2)
<ul style="list-style-type: none"> <li>• Again, on our rotations, I would teach for one hour, five days a week, for about 3-4 weeks. Then I would not teach science until the next rotation. Again, not my preferred way to teach science.</li> <li>• We do not have a time dedicated to science each day or week; rather, those times are grouped into the three yearly units we cover. So we spend significant time during those weeks devoted to each unit.</li> </ul>		

<b>Q10. Do you teach science topics as part of teaching other subjects? We refer to this as "integrated content". (n=151)</b>	Yes = 72%	No = 28%
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<b>Q11. In which other subjects do you cover science topics? (Number of responses)</b>	
Agriculture = 1	Math = 45
Arts = 44	Reading = 98
Exploratory = 1	Social Emotional Learning = 1
Gym = 2	Social Studies = 39
Health Topics = 55	Units of Inquiry = 1
Immersion Language = 1	Writing = 4
Main Lesson = 1	

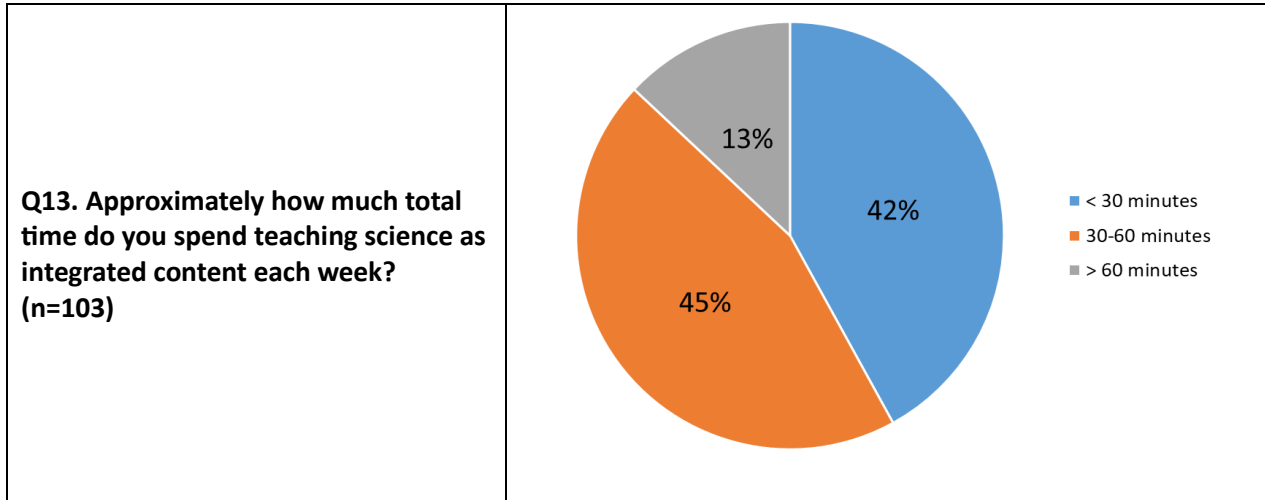
Subject Area for Integration (# of responses)



Other:

- This is unit by unit, sometimes it's integrated others it's stand alone.
- a few days a month
- It varies greatly. It is only integrated because I make it that way. According to district leadership, I'm not supposed to integrate science with other subjects as this would mean I am straying from the "guaranteed and viable curriculum"
- once a month maybe
- Only for one Unit that I teach
- varies by Language Arts Unit: Circulatory System, Extreme Settings (erosion/landforms)
- Depends on the unit we're teaching in reading. Science is included in 2 of our 4 units.
- depends on the reading unit. Right now we are learning about animals, so everyday, but last unit not at all.
- Same as previous answer. We teach science and teach math and literacy skills through our science lessons.
- Each day of the science rotation (4-6 weeks at a time maybe)

- It depends on the unit. For example, we have a ELA unit about the impact of change in weather in the fall on plants, animals and people. Science was integrated daily during this unit.
- Every 3 units so about 9 week cycles
- It's complicated.....
- periodically throughout the year

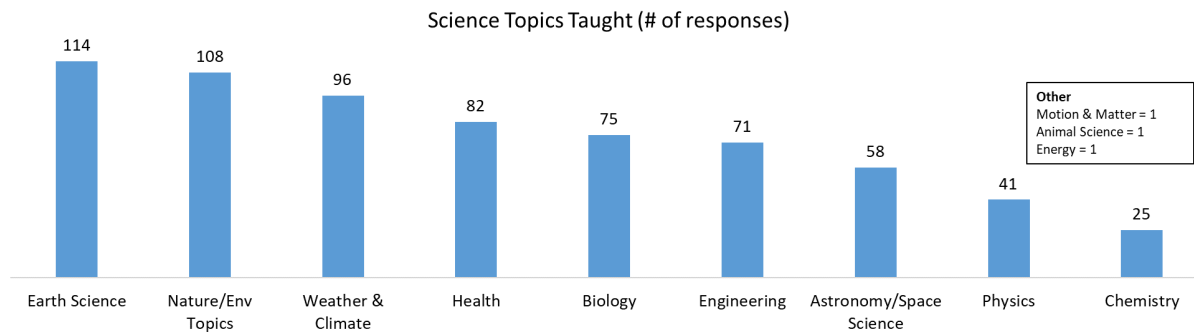


>60 minutes includes:

- Approximately 100 minutes per week.
- Dependent on the integrated inquiry project
- 240
- depends on the unit
- depends on the unit....150-180 min
- 80 mins
- Approximately 3 hours

**Q14. When you teach science either as a stand alone or integrated content, what science topics do you cover?**

Animal Science = 1	Engineering = 71
Astronomy/Space Science = 58	Health = 82
Biology = 75	Motion and Matter = 1
Chemistry = 25	Nature/Environmental Topics = 108
Earth Science = 114	Physics = 41
Energy = 1	Weather & Climate = 96



**Q15. What resources do you use when you teach science?**

I develop my own science lessons and curriculum = 58

I use materials from internet sources = 95

I use curriculum and lessons that I get from other teachers outside my school = 22

I use curriculum and lessons that I get from other teachers in my school = 35

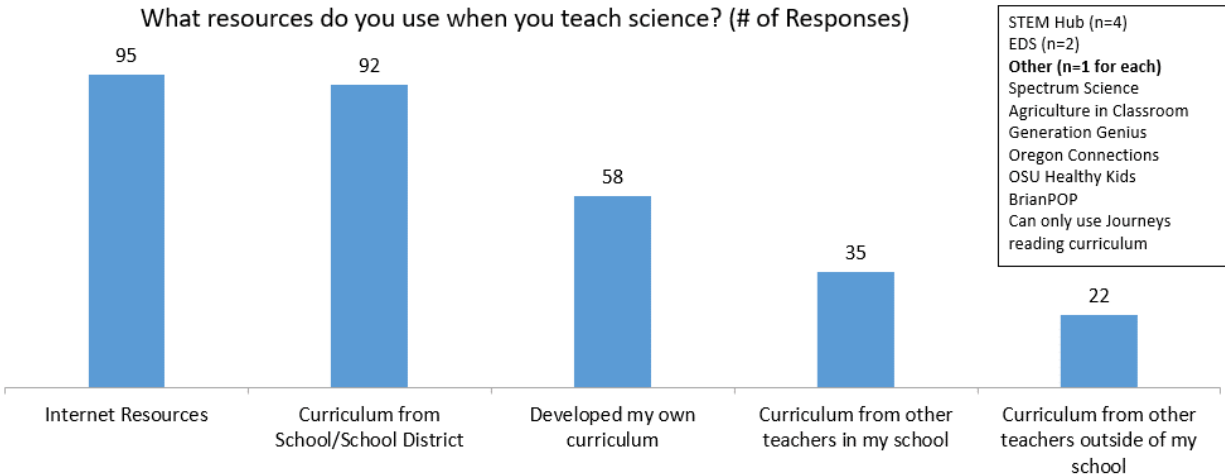
I use a kits/curriculum from a STEM Hub = 4

I use a kit/curriculum from the Education Service District =2

I use kits/curriculum from the school or school district = 92

Other = 9

- Spectrum Science
- Agriculture in the Classroom
- Generation Genius
- Oregon Connections
- Oregon Open Learning
- OSU Health Kids Program
- BrainPOP
- I supplement some lessons with Flocabulary
- Forbidden from NOT using Journeys reading curriculum



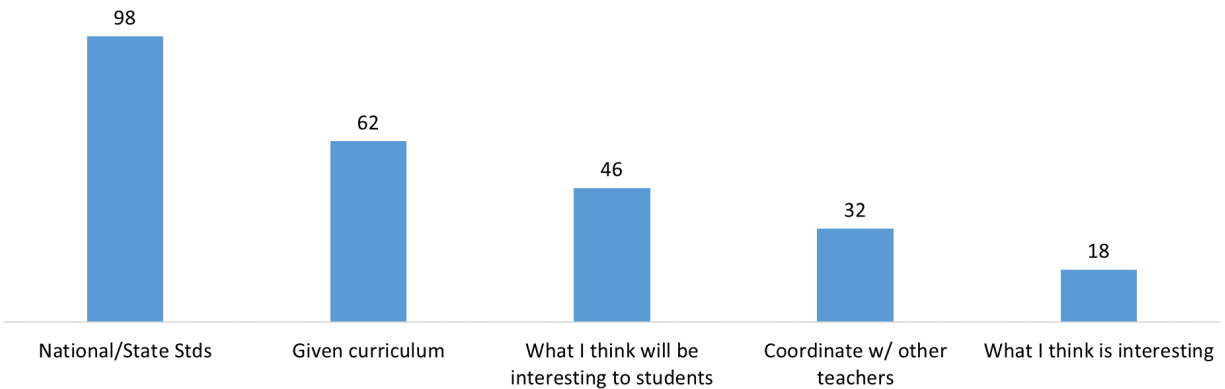
When you teach science either as a stand alone or integrated content, how do you choose which science topics to teach?
I choose what I think is interesting = 18
I choose what I think will be interesting to my students = 46
I am guided by national (e.g., NGSS) or state standards = 98
I coordinate with other grade teachers on what to teach = 32
I used a given curriculum = 62

Other

- I follow the standards that are matched to my grade level FOSS kits, but use many sources to create a cohesive hands on unit
- Connect to other content
- District science expectations as well
- I dictate our lessons on what we are learning in other classes or what trips we will be going on.



How do you choose which science topics to teach? (# of Responses)



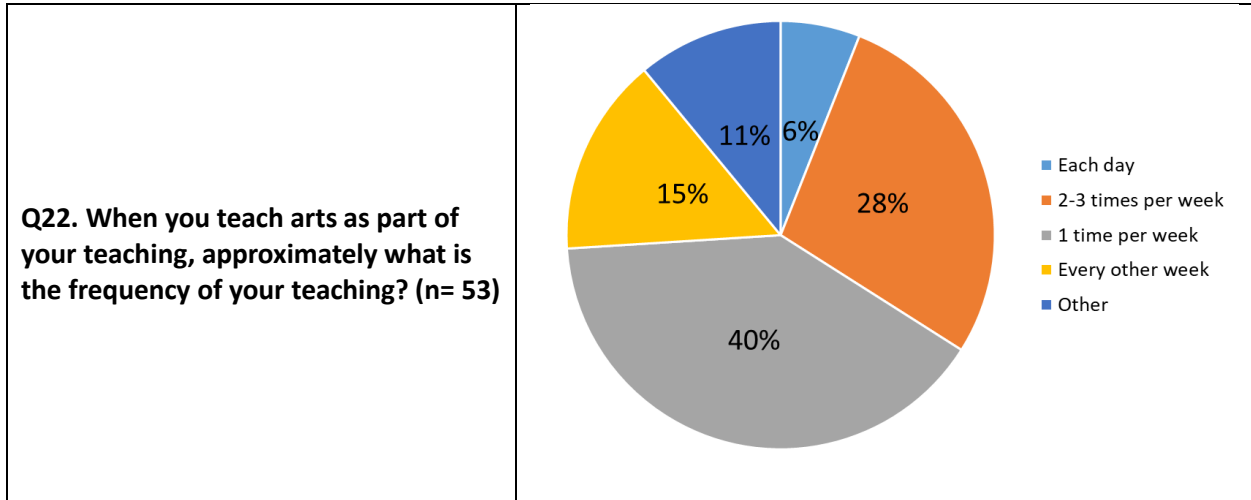
<b>Q17. What are some obstacles that prohibit or impede you from teaching science?</b>
because i don't know science?
Need more Science funding for teachers
Science time is rotated with health and social studies through the year. My district mostly cares about core curriculum and the people in charge don't believe in integration.
Instructional time is "used up" with Reading and Math requirements
Time needed to prep lessons of the curriculum, our curriculum is very time intensive
Insufficient time to plan and prepare materials.
I love teaching science, but I also am required to teach social studies, health, and SEL during rotating content time. Teachers have a million requirements put on them for minutes that must be met.
No curriculum or materials provided. Not encouraged by the district or principal.
terrible materials and outdated curriculum

<b>Q18. In the past year have you participated in science related professional development? (n=138)</b>	Yes = 34%	No = 66%

## ARTS INTEGRATION QUESTIONS

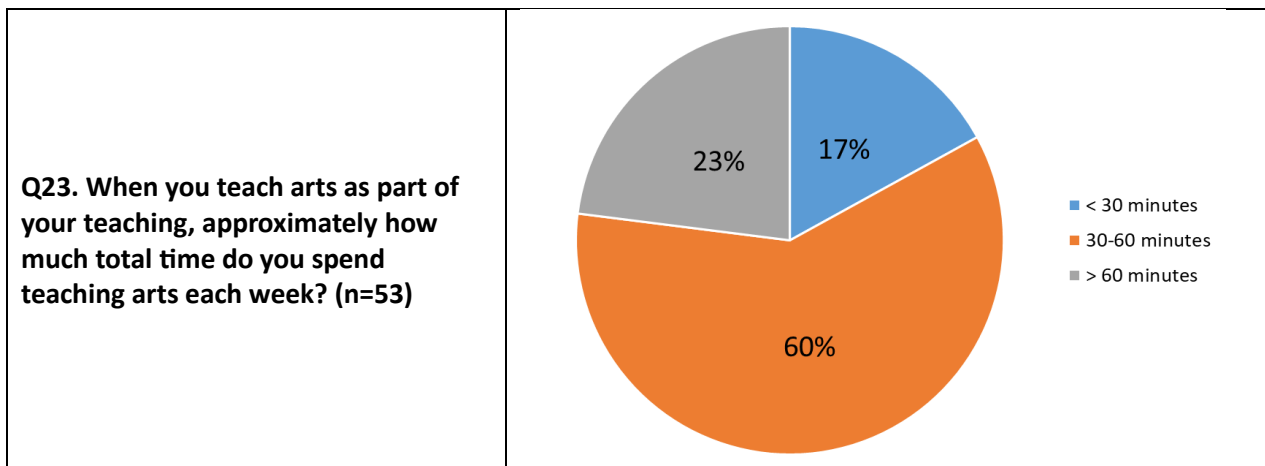
<b>Q20. Is arts teaching part of your school's recommended teaching schedule for classroom teachers? (n=138)</b>	Yes = 24%	No = 76%
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<b>Q21. During your teaching this past year, did you have a dedicated time in your schedule for teaching just art topics? (n=138)</b>	Yes = 38%	No = 62%
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Other:

- I try to integrate as much as possible, and I have a stand alone time just for art.
- We have art with our high school art teacher that rotates once every seven weeks
- Delivered by art and music specialists 1 time each a week
- 1 big project each quarter--broken up
- It is part of a science, social studies, and art rotation so I teach about 20 art days a year.
- 2 Art Blocks per year, six weeks of one hour a day



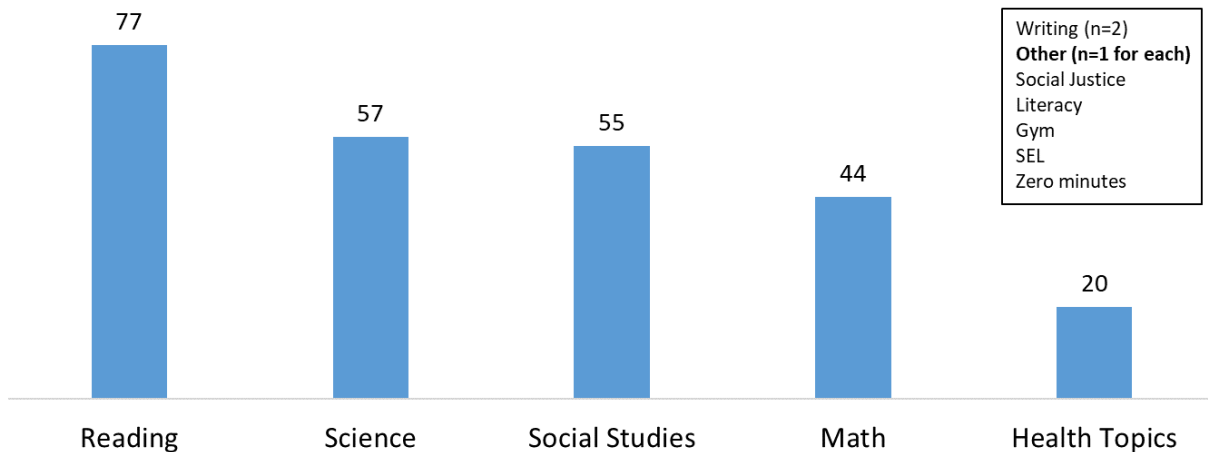
Greater than 60 minutes responses:

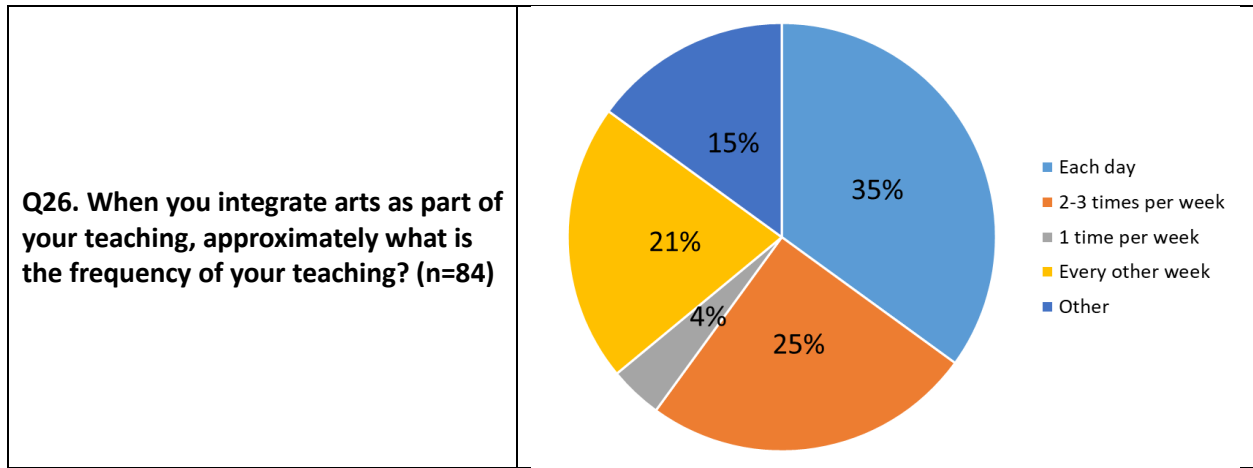
- 120 minutes
- 90 minutes
- one art class, one music class
- 120 minutes
- We have mixed grade level explore classes offered for 50 minutes M-Th. Often these are integrated art explores that I offer.
- 80 minutes
- 90 minutes

<b>Q24. In addition or instead of a dedicated time teaching arts, do you also cover art topics as part of teaching other subjects? We refer to this as "integrated content". (n=138)</b>	Yes = 62%	No = 38%
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<b>Q25. Into what other subjects do you integrate standards-based art instruction?</b>					
Reading = 77	Science = 57	Soc Studies = 55	Math = 44	Health = 20	Other = 7

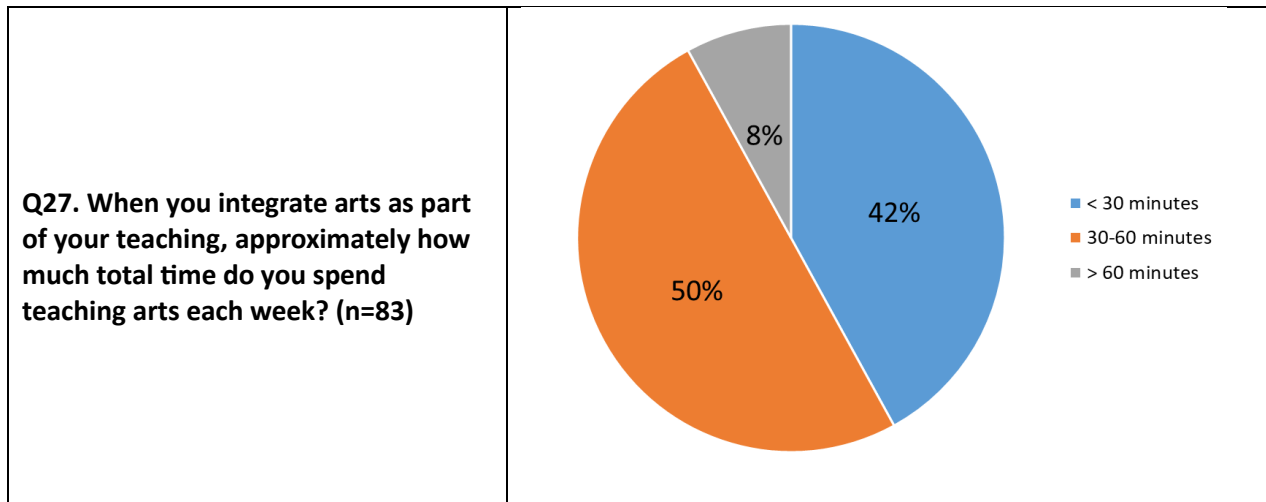
Into what other subjects do you integrate standards-based art instruction? (# of Responses)





Other answers:

- 1-2x per month
- 2 or 3 lesson per module. Modules are 31 lessons long.
- art history and words are part of our reading curriculum. Sometimes we add art to our writing
- Depends based on the "Wit & Wisdom" curriculum
- once a month
- when I see that there is an opportunity
- when it comes up in curriculum, rarely
- When the ELA curriculum includes arts
- When we can squeeze it in and not get called out for not using the Journeys or iReady materials
- A few times a year per grade level
- 



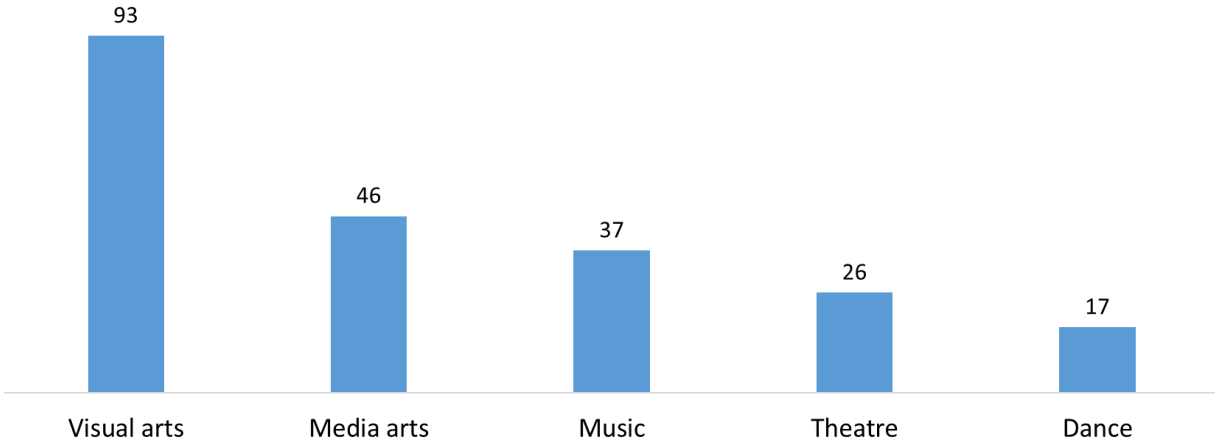
More than 60 minutes:

- 80 minutes
- 90 minutes
- Fridays

**Q28. Which arts disciplines do you teach either as a stand alone topic or integrated content? (# of responses)**

Visual Arts = 93	Media Arts = 46	Music = 37	Theatre = 26	Dance = 17
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Which arts disciplines do you teach either as a stand alone topic or integrated content?  
(# of Responses)

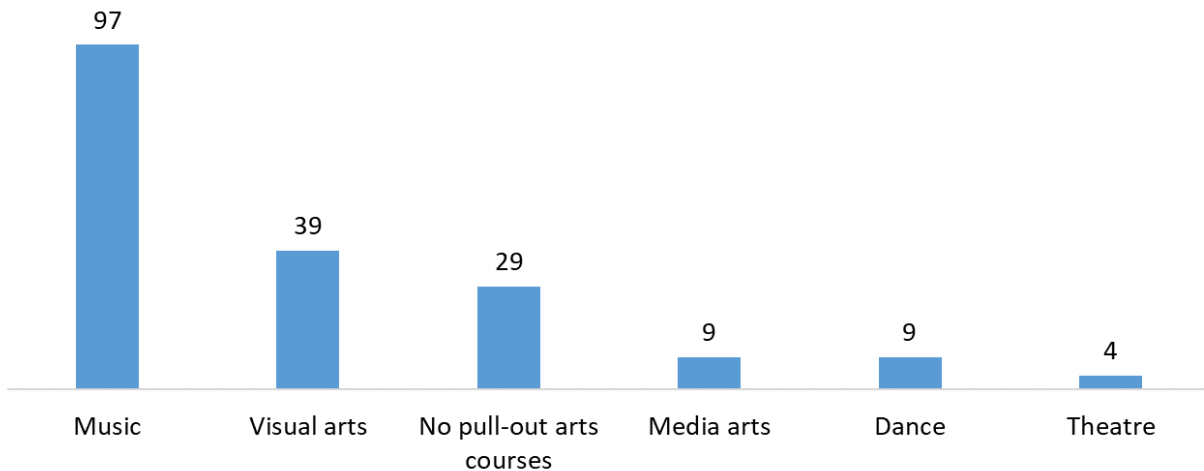


**Q29. Which arts disciplines are taught as pull-out classes when students receive instruction from an arts teacher? (# of Responses)**

Visual Arts = 39	Media Arts = 9	Music = 97	Theatre = 4	Dance = 9
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No pull-out arts courses = 29

Which arts disciplines are taught as pull-out classes when students receive instruction from an arts teacher? (# of Responses)



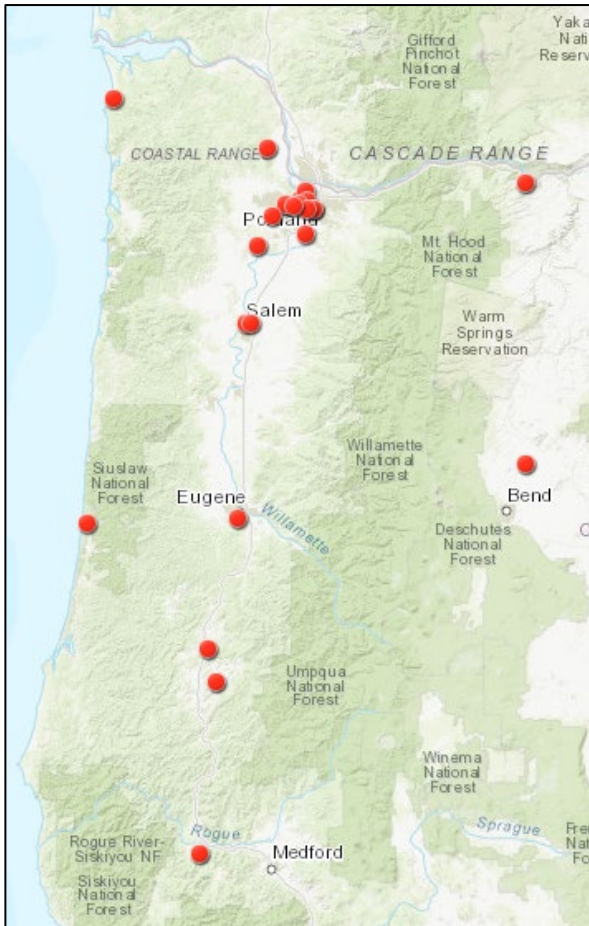
<b>Q30. In the past year have you participated in arts related professional development? (n=135)</b>	Yes = 8%	No = 92%
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## APPENDIX A2

### ELEMENTARY MUSIC TEACHER SURVEY RESULTS

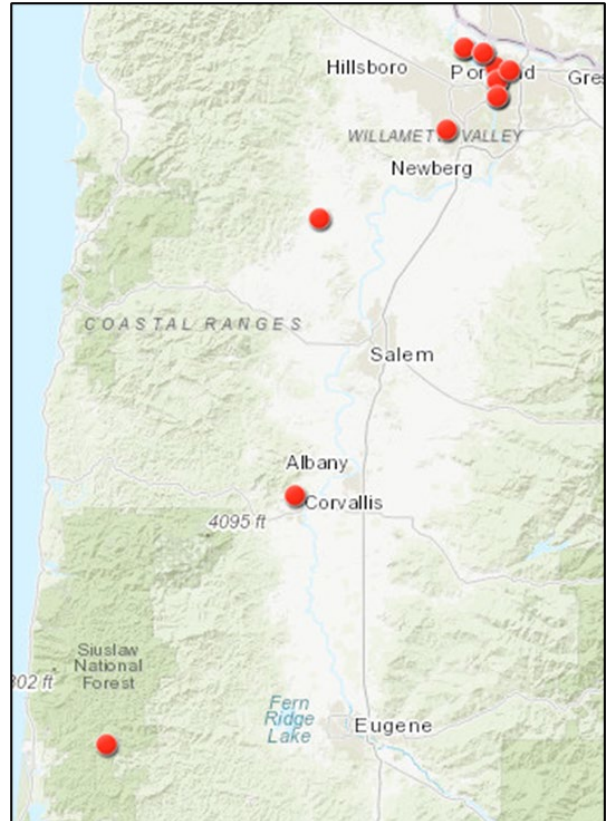
#### SURVEY DATA DETAILS

##### Survey Numbers and Locations



##### MUSIC TEACHERS

32 total responses with 27 completions



##### ART TEACHERS

16 total responses with 15 completions

**Music & Art Teacher Locations.** These are locations where participants completed the survey and may not be school locations. For the music teachers, there was one response from the Seattle area, one from the San Francisco area and one from the Dallas-Fort Worth area. These are not shown on the map

### GENERAL ARTS QUESTIONS

<b>Which arts disciplines do you teach?</b>				
<b>MUSIC TEACHERS</b>	Music = 32	Dance = 1	Theatre = 3	Media arts = 1
<b>ART TEACHERS</b>	Visual Arts = 15		Dance = 1	

<b>In a week, how much time do students at your school receive pull out arts instruction in your art area?</b>			
<b>MUSIC TEACHERS</b>	Less than 30 minutes = 7	30-60 minutes = 15	>60 minutes = 7
<b>ART TEACHERS</b>	Less than 30 minutes = 2	30-60 minutes = 13	>60 minutes = 1

Other answers from music teachers

- 45 minutes- 1/week
- 90 minutes every 6 days
- 75 minutes
- 200 minutes of 5th grade and 90 minutes of 4th grade. HOWEVER, these are not “pull out” as classes happen after school or during recess. We are not allowed to pull students out of academic class.
- 40 or 80 minutes depending on the week.
- 60-85 minutes

Other answers from art teachers

- 1.5 hrs./week with 45 minutes VA & 45 minutes Music

### SCIENCE INTEGRATION QUESTIONS

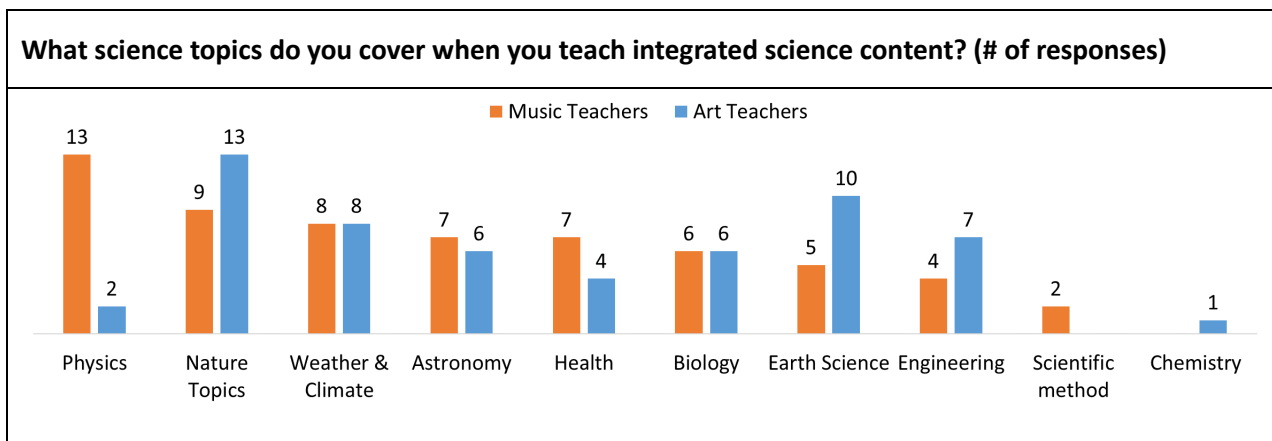
<b>During your teaching this past year, did you integrate science topics with your arts instruction?</b>		
<b>MUSIC TEACHERS</b>	Yes = 17	No = 11
<b>ART TEACHERS</b>	Yes = 15	No = 1

<b>How often do you integrate science topics in your instruction?</b>					
<b>MUSIC TEACHERS</b>	Each day = 2		Every other week = 1		Other = 14
<b>ART TEACHERS</b>	Each day = 1	2-3/week = 4	1x/week = 1	Every other week = 2	Other = 7



<p><u>Other answers from music teachers:</u></p> <ul style="list-style-type: none"> <li>• Once a month (Chosen 4 times)</li> <li>• Once per grading period</li> <li>• Whenever I can</li> <li>• Weekly during specific units</li> <li>• 2-3x per school year</li> <li>• As often as possible</li> <li>• When appropriate, not often</li> <li>• A few times per semester as it applies to the subject.</li> </ul>	<p><u>Other answers from art teachers:</u></p> <ul style="list-style-type: none"> <li>• Once a month (Chosen 3 times)</li> <li>• Occasionally</li> <li>• Randomly</li> <li>• Varies...depends on topics...I plan lessons for the week, so a few months a year are pretty well integrated</li> </ul>
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Approximately how much total time do you spend teaching integrated science content each week?			
<b>MUSIC TEACHERS</b>	Less than 30 minutes = 17		
<b>ART TEACHERS</b>	Less than 30 minutes = 11	30-60 minutes = 2	>60 minutes = 1



What resources do you use when you teach science?		
	<b>MUSIC TEACHERS</b>	<b>ARTS TEACHERS</b>
I develop my own science lessons and curriculum	10	8
I use materials from internet sources	7	5
I use curriculum and lessons that I get from other teachers outside my school	4	4

I use curriculum and lessons that I get from other teachers in my school	1	1
I use a kits/curriculum from a STEM Hub	1	0
Other	Part of adopted music curriculum - quavered.com Bill Nye	Visual arts lessons I teach visual arts-based lessons that sometimes include science

<b>How do you choose which science topics to teach/integrate?</b>		
	<b>MUSIC TEACHERS</b>	<b>ARTS TEACHERS</b>
I choose what I think is interesting	6	10
I choose what I think will be interesting to my students	10	9
I am guided by national or state standards	4	6
I coordinate with other grade teachers on what to teach	3	4
I use a given curriculum	0	1

<b>All Responses from Music Teachers.</b>
<b>What are some obstacles that prohibit or impede you from integrating science topics in your arts instruction?</b>
We are skill-building, and that process takes a lot of time and repetition. I have an enormous amount of material to cover and at least a dozen performances to prepare, so there isn't time to add anything else and maintain the high level I expect from my program.
Time constraints between two schools. Collaboration time with Science/Classroom teachers. Access to the science curriculum.
I am a music teacher and have a ton of music standards to teach. Science topics come up only when they are directly related to a music standard or topic.
Lack of time, and lack of science lessons/support in the grade-level classroom
Spending time on classroom management
Insufficient amount of teaching time per class; insufficient knowledge on how to bring the applicable science topics to the appropriate age level
Student safety and behavior, as well as resources for developmentally as appropriate lesson ideas.

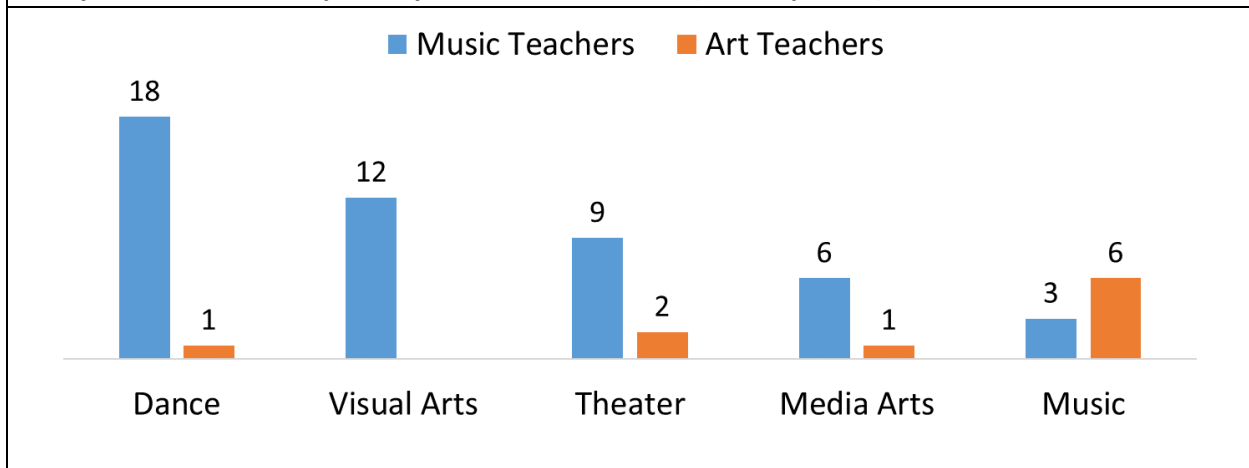
The current opportunity to learn standards for music instruction at the elementary level reflects an expectation of 90 minutes per week of music, while our students receive about two thirds of that. Were we to focus substantially on a STEAM-style integration, my fear is we would create further obstacles to achieving the music standards. Beyond that, these two subjects are distinct and separate in our district curriculum, with designated times to teach them separately.

### ARTS INTEGRATION QUESTIONS

During your teaching this past year, did you integrate other art topics with your regular art instruction? For instance, music and dance?

<b>MUSIC TEACHERS</b>	Yes = 26	No = 2
<b>ART TEACHERS</b>	Yes = 6	No = 9

What other subjects did you integrate into your standard arts instruction? Please choose disciplines that you do not teach as part of your usual instruction. (# of responses)



How often do you integrate other art topics in your arts instruction?

<b>MUSIC TEACHERS</b>	1x/week = 3	2-3x/week = 2	Each day = 6	Every other week = 5	Other = 9
<b>ART TEACHERS</b>			Each day = 1	Every other week = 1	Other = 4

Other Answers for Music Teachers

- About once every 2 months
- Intermittently
- When Possible
- Dance/movement daily & art when linked to music or composer.

Other Answers for Art Teachers

- Less than once a month
- 4x per year
- Depends on topic...month or two a year

- Elementary music: every week; Band: 1-3 times per year
- Few times per semester

<b>Approximately how much total time do you spend integrating other art topics in your arts instruction each week?</b>		
<b>MUSIC TEACHERS</b>	Less than 30 minutes = 23	30-60 minutes = 2
<b>ART TEACHERS</b>	Less than 30 minutes = 5	30-60 minutes = 1

**ARTS PROFESSIONAL DEVELOPMENT QUESTION**

<b>In the past year have you participated in arts related professional development?</b>		
<b>MUSIC TEACHERS</b>	Yes = 21	No = 6
<b>ARTS TEACHERS</b>	Yes = 13	No = 2

## APPENDIX A3

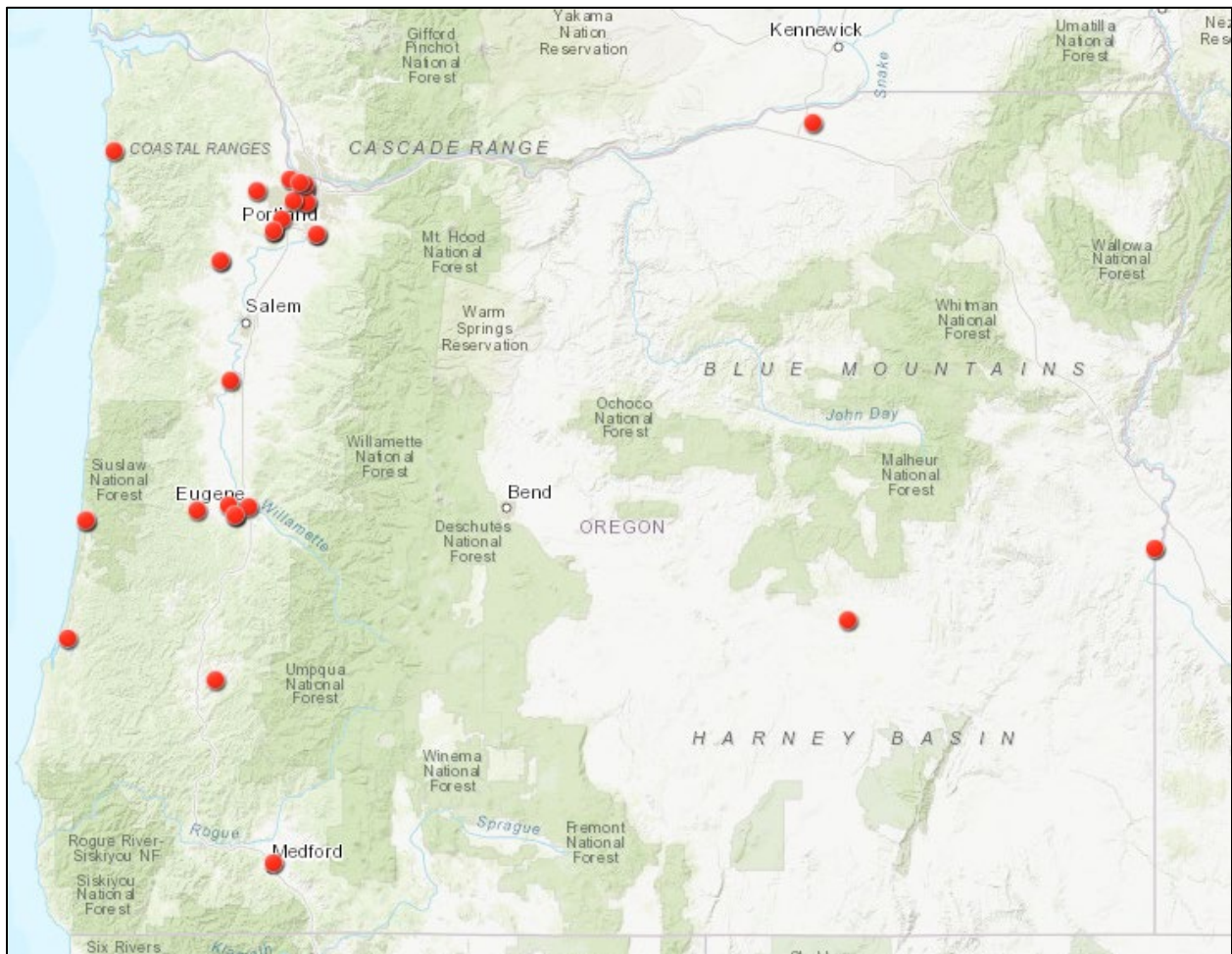
### ELEMENTARY “OTHER” TEACHER SURVEY RESULTS

#### SURVEY DATA DETAILS

62 total responses with 37 completions.

#### Survey locations

These are locations where participants completed the survey and may not be school locations. There was one response from the Seattle area.



### PRIMARY TEACHING RESPONSIBILITY (n=51)

Admin (Building leader, Dean Students) = 5	<u>Other:</u> <ul style="list-style-type: none"> <li>• Climate science</li> <li>• Coach and support</li> <li>• Drama-based STEM</li> <li>• Experiential Education Teacher</li> <li>• Math Honors</li> <li>• Teacher's aid</li> <li>• Think Big Space Lead (STEAM Teacher)</li> <li>• Title I Service Coordinator and Provider</li> <li>• Retired or out of classroom (3)</li> <li>• Charter School administrator*: I am an administrator/curriculum, instruction, and climate coach at a first-year charter school focused on changing the academic narrative for Black, Brown and Indigenous youth.</li> </ul>
ELD/ELL/Bilingual teacher = 5	
Instructional coach = 5	
Elementary Science Teacher/Specialist = 5	
Librarian = 3	
TOSA = 4	
SPED/Resource Teacher = 3	
Principal = 3	
School Counselor = 3	
SEL/Behavior safety = 3	

\*In the following compilations this entry will be referred to as Charter School admin

### SCIENCE INTEGRATION QUESTIONS

<b>In your primary teaching job, do you have opportunities to integrate science instruction in your work?</b>	Yes = 33	No = 16
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YES	NO
<ul style="list-style-type: none"> <li>• Administrator/Building Leader/District Admin</li> <li>• Certified Librarian/ Library Media Specialist/ Teacher Librarian</li> <li>• Climate science</li> <li>• Coach &amp; Support</li> <li>• Drama Based STEM</li> <li>• ELD/ELL (4)</li> <li>• Elementary science teacher/STEM specialist (5)</li> <li>• Experiential Education Teacher</li> <li>• Charter School admin</li> <li>• Instructional Coach</li> <li>• TOSA (4)</li> <li>• Math Honors</li> <li>• Recently retired elementary STEM teacher (2)</li> <li>• Resource Teacher Special Education</li> <li>• School Counselor</li> <li>• SEL (2)</li> </ul>	<ul style="list-style-type: none"> <li>• Administrative/Dean of Students</li> <li>• EL Emerging Bilingual teacher/coordinator</li> <li>• Instructional Coach (3)</li> <li>• Instructional coach for K-8 school</li> <li>• LRC sped teacher</li> <li>• School counselor (2)</li> <li>• SEL, behavior/safety</li> <li>• Special Education</li> <li>• Teacher's Aid</li> <li>• Title I Service Coordination and Provider</li> <li>• transitioned out of the classroom this year</li> </ul>

<ul style="list-style-type: none"> <li>• Think Big Space lead elementary teacher (STEAM teacher)</li> </ul>	
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<b>How often do you integrate science topics in your instruction?</b>				
Each day = 13	2-3 x/week = 4	1x/week = 2	Every other week = 4	Other = 6

Other:

- As needed when collaborating with classroom teachers
- Occasionally
- When there is time
- When we can

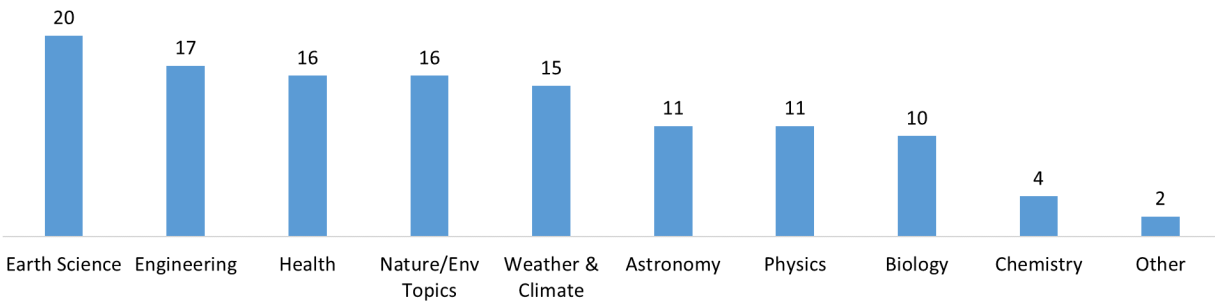
<b>Approximately how much total time do you spend teaching integrated science content each week?</b>		
Less than 30 minutes = 12	30-60 minutes = 8	Greater than 60 minutes = 7

>60 minutes includes:

- In each 30 min. class
- I teach science 100% of the day a dedicated K-5 Science Specialist Teacher
- I personally teach all the science for all of our elementary school. However, each grade of kids receives a different amount during the month. 2 - 5 get 5 hours a week. K-1 gets 3 hours a month.
- 6 hours
- 1 hour

<b>What science topics do you cover when you teach integrated science content?</b>	
Astronomy/Space Science = 11	Health = 16
Biology = 10	Nature/Environmental Topics = 16
Chemistry = 4	Physics = 11
Earth Science = 20	Weather & Climate = 15
Engineering = 17	Other = 2 Brain science

Science Topics (# of responses)



**What resources do you use when you teach science?**

I develop my own science lessons and curriculum = 19

I use materials from internet sources = 21

I use curriculum and lessons that I get from other teachers outside my school = 4

I use curriculum and lessons that I get from other teachers in my school = 5

I use a kits/curriculum from a STEM Hub = 1

I use kits/curriculum from the school or school district = 7

Other = 5 (plus other comments)

- Books from our library collection
- I also use the Unit 8 of the Bridges Math Program
- Materials from other counselors and counseling resources
- My team and I have spent two years creating a STEM curriculum for all K-5 students in our district
- NSTA

**How do you choose which science topics to teach/integrate?**

I choose what I think is interesting = 5

I choose what I think will be interesting to my students = 14

I am guided by national (e.g., NGSS) or state standards = 15



I coordinate with other grade teachers on what to teach = 9
I used a given curriculum = 3

<b>What are some obstacles that prohibit or impede you from integrating science in your teaching?</b>
Dean of Students - Not a classroom teacher
Instructional Coach - Our building schedule blocks out the majority of our time for reading, writing, and math.
Instructional Coach - I don't provide direct instruction to students in my role
LRC SPED Teacher - I teach struggling students for reading, math and writing
Transitioned Out of the Class - Mandatory use of other materials that do not incorporate Science in a meaningful way.
Teacher's Aide - I give extra instruction in mainly reading, math, and writing.
Instructional Coach - Time, instructional coach position was not created to prioritize science
EL Emerging Bilingual Teacher/Coordinator – I have very short time with students. I will occasionally work with a student on science vocabulary, but I do not teach science.
SPED Teacher - It's not one of the usual goals that are listed in helping a student to improve.

### ARTS INTEGRATION QUESTIONS

<b>In your primary teaching job, do you have opportunities to integrate art instruction in your work?</b>	Yes = 24	No = 11
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YES	NO
<ul style="list-style-type: none"> <li>• SEL, behavior/safety (2)</li> <li>• Transitioned out of the classroom this year</li> <li>• School Counselor</li> <li>• STEM specialist (4)</li> <li>• Climate science</li> <li>• Experiential Education Teacher</li> <li>• Charter School admin</li> <li>• Administrator</li> <li>• Teacher Librarian</li> <li>• Drama Based STEM</li> </ul>	<ul style="list-style-type: none"> <li>• Retired, substitute, K-5 STEM for children learning English</li> <li>• K-5 Dedicated STEM Teacher</li> <li>• Instructional coach (2)</li> <li>• LRC sped teacher (2)</li> <li>• Teacher's Aid</li> <li>• TOSA</li> <li>• Coach &amp; Support</li> <li>• ELD/EL Emerging Bilingual (2)</li> </ul>

<ul style="list-style-type: none"> <li>• Recently retired elementary science and STEM teacher</li> <li>• Instructional Coach (2)</li> <li>• Think Big Space lead elementary teacher (steam teacher)</li> <li>• English Language Development Teacher</li> <li>• Library Media Specialist</li> <li>• Instructional Coach</li> <li>• Math Honors</li> <li>• Resource Teacher Special Education</li> <li>• Building Leader</li> </ul>	
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<b>What other subjects did you integrate into your standard arts instruction? Please choose disciplines that you do not teach as part of your usual instruction.</b>				
Music = 6	Dance = 3	Theater = 3	Media Arts = 6	Visual Arts = 23

<b>How often do you integrate other art topics in your arts instruction?</b>				
1x/week = 5	2-3x/week = 3	Each day = 2	Every other week = 3	Other = 9

Other answers:

- One week a month or so because I only see students once per week for one hour
- Project-by-project basis
- Once a month
- When it is appropriate to the lesson
- When time allows
- Art projects are integrated into science and social studies units, so about 6 times each year.
- A few times a year per grade level

<b>Approximately how much total time do you spend integrating other art topics in your arts instruction each week?</b>		
Less than 30 minutes = 16	30-60 minutes = 5	More than 60 minutes = 1

More than 60 minutes: Depends on the project being explored however we engage in art activities for at least an hour each day (From Charter School admin)

<b>What are some obstacles that prohibit or impede you from integrating art in your teaching?</b>
Retired, substitute, K-5 STEM for children learning English: time
K-5 Dedicated STEM Teacher: Time. I have 30 minute class sessions, one day per week.
Instructional coach for K-8 school: I don't engage in direct instruction of students
LRC sped teacher: I have small groups for reading, writing and math
LRC sped teacher: I give extra instruction in mainly reading, math, and writing.
TOSA: I am told we don't have time
Coach & Support: Time and flexibility in schedule
Instructional Coach: Instructional coach job does not prioritize art instruction
ELD: Time
EL Emerging Bilingual teacher/coordinator: I do teach a before and after school art program, but students have limited opportunity to attend depending on time and transportation.
Special Education: I have to be very selective about the materials that I use to progress the students with their goals.

## APPENDIX A4

### Elementary Teacher Science & Arts Teaching Survey

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#### Start of Block: Block 1 - Introduction

Q1 The Oregon State University STEM Research Center has been contracted by the Oregon Department of Education (ODE) to conduct an evaluation of the Well-Rounded Access Program (WRAP). The essential aim of WRAP is to expand the access of STEAM and arts courses across Oregon, especially in communities that have not had these opportunities for their students in the past. Although there are many important content areas that constitute a well-rounded program, ODE would like a better understanding of how science and the arts are taught in elementary school, both topic areas and frequency of instruction. We are asking you to complete this survey in order to inform future STEM/STEAM and arts education efforts in K-5 grades. In this survey arts includes the visual arts, music, theater, media arts and dance.

#### End of Block: Block 1 - Introduction

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#### Start of Block: Block 2 - Type of Teacher

Q2 What is your current teaching position in your school? Please choose your primary position.

- Classroom Teacher
- Music Teacher
- Arts Teacher
- Physical Education Teacher
- Other

#### End of Block: Block 2 - Type of Teacher

---

#### Start of Block: Block 3 Schoolwide Science Questions

Q3 Please answer the next two questions about science teaching at your school to the best of your ability. We realize that some elementary teachers may not have direct experience related to these two questions.

Q4 Is science teaching part of your school's recommended teaching schedule?

- Yes
- No
- Not sure

Q5 Do other professionals come to your school to teach science? For instance instructors from a STEM Hub or business/industry professionals.

- Yes
- No
- Not sure

End of Block: Block 3 Schoolwide Science Questions

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Start of Block: Block 4 - Science Teaching Questions for Classroom Teachers

Q6 The next set of questions ask about your teaching of science in the classroom.

Q7 During your teaching this past year, did you have a dedicated time in your schedule for teaching just science topics?

- Yes
- No

Q8 When you teach science, approximately what is the frequency of your teaching?

- Each day
- 2-3 times per week
- 1 time per week
- Every other week
- Other \_\_\_\_\_

Q9 Approximately how much **total time** do you spend teaching science each week? For example, if you teach 20 minutes three days per week you would choose 30 to 60 minutes.

- Less than 30 minutes
  - 30 to 60 minutes
  - More than 60 minutes. If more than 60 minutes, please specify the amount of time.
- 

End of Block: Block 4 - Science Teaching Questions for Classroom Teachers

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Start of Block: Block 5 - Integrated Science Teaching Questions for Classroom Teachers

Q10 Do you teach science topics as part of teaching other subjects? We refer to this as "integrated content".

- Yes
- No

Q11 In which other subjects do you cover science topics? Choose all that apply.

- Reading
  - Math
  - Arts
  - Social Studies
  - Health Topics
  - Other (please specify)
-

Q12 When you teach science as integrated content, approximately what is the frequency of your teaching?

- Each day
- 2-3 times per week
- 1 time per week
- Every other week
- Other \_\_\_\_\_

Q13 Approximately how much total time do you spend teaching science as integrated content each week?

- Less than 30 minutes
- 30 to 60 minutes
- More than 60 minutes. If more than 60 minutes, please specify the amount of time.  
\_\_\_\_\_

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End of Block: Block 5 - Integrated Science Teaching Questions for Classroom Teachers

Start of Block: Block 6 - Science Resources

Q14 When you teach science either as a stand alone or integrated content, what science topics do you cover? Choose all that apply.

- Astronomy/Space Science
- Biology
- Chemistry
- Earth Science
- Nature/Environmental Topics
- Engineering
- Physics
- Weather and Climate
- Health
- Other \_\_\_\_\_



Q15 When you teach science either as a stand alone or integrated content, what resources do you use? Choose all that apply.

- I use a kit/curriculum from the school or school district
- I use a kit/curriculum from the Education Service District
- I use a kit/curriculum from a STEM Hub
- I develop my own science lessons and curriculum
- I use curriculum and lessons that I get from other teachers in my school
- I use curriculum and lessons that I get from other teachers outside my school
- I use materials from internet sources (e.g., PBS Learning Media, Oregon Open Learning, Mystery Science, etc.)
- Other \_\_\_\_\_

Q16 When you teach science either as a stand alone or integrated content, how do you choose which science topics to teach? Choose all that apply.

- I am guided by national (e.g., NGSS) or state standards
- I choose what I think is interesting
- I choose what I think will be interesting to my students
- I coordinate with other grade teachers on what to teach
- I use a given curriculum
- Other \_\_\_\_\_

End of Block: Block 6 - Science Resources

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Start of Block: Block 7 - Obstacles to Teaching Science

Q17 What are some obstacles that prohibit or impede you from teaching science?

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End of Block: Block 7 - Obstacles to Teaching Science

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Start of Block: Block 8 - Science Teaching Professional Development

Q18 In the past year have you participated in science related professional development?

Yes

No

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End of Block: Block 8 - Science Teaching Professional Development

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Start of Block: Block 9 - Art Teaching Questions for Classroom Teachers

Q19 The next series of questions ask about your experience with standards-based art teaching.

Q20 Is arts teaching part of your school's recommended teaching schedule for classroom teachers?

Yes

No

Q21 During your teaching this past year, did you have a dedicated time in your schedule for teaching just art topics?

Yes

No

Q22 When you teach arts as part of your teaching, approximately what is the frequency of your teaching?<br>

- Each day
- 2-3 times per week
- 1 time per week
- Every other week
- Other \_\_\_\_\_

Q23 When you teach arts as part of your teaching, approximately how much total time do you spend teaching arts each week?

- Less than 30 minutes
- 30-60 minutes
- More than 60 minutes. If more than 60 minutes, please specify the amount of time.  
\_\_\_\_\_

Q24 In addition or instead of a dedicated time teaching arts, do you also cover art topics as part of teaching other subjects? We refer to this as "integrated content".

- Yes
  - No
-

Q25 Into what other subjects do you integrate standards-based art instruction? Choose all that apply.

- Reading
- Math
- Social Studies
- Health Topics
- Science
- Other \_\_\_\_\_

Q26 When you integrate arts as part of your teaching, approximately what is the frequency of your teaching?<br>

- Each day
- 2-3 times per week
- 1 time per week
- Every other week
- Other \_\_\_\_\_

Q27 When you integrate arts as part of your teaching, approximately how much total time do you spend teaching arts each week?

- Less than 30 minutes
- 30-60 minutes
- More than 60 minutes. If more than 60 minutes, please specify the amount of time.  
\_\_\_\_\_

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Q28 Which arts disciplines do you teach either as a stand alone topic or integrated content?  
Please choose all that apply.

- Visual arts
- Media arts
- Music
- Dance
- Theatre

Q29 In your school, which of the following arts disciplines are taught as pull-out classes when students receive instruction from an arts teacher? Choose all that apply.

- Visual arts
- Media arts
- Music
- Dance
- Theatre
- There are no pull-out arts courses in my school

End of Block: Block 9 - Art Teaching Questions for Classroom Teachers

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Start of Block: Block 10 - Arts Professional Development

Q30 In the past year have you participated in arts related professional development?

- Yes
- No

End of Block: Block 10 - Arts Professional Development

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Start of Block: Block 11 - Music & Art Teachers Subject Areas

Q31 Which arts disciplines do you teach? Please choose all that apply.

- Visual arts
- Music
- Dance
- Theatre
- Media arts

Q32 In a week, how much time do students at your school receive pull out arts instruction in your art area?

- Less than 30 minutes
  - 30 to 60 minutes
  - More than 60 minutes. If more than 60 minutes, please specify the amount of time.
- 

End of Block: Block 11 - Music & Art Teachers Subject Areas

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Start of Block: Block 12 - Music & Art Teacher Integrate Science Questions

Q33 During your teaching this past year, did you integrate science topics with your arts instruction?

Yes

No

---

Q34 How often do you integrate science topics in your instruction?

Each day

2-3 times per week

1 time per week

Every other week

Other \_\_\_\_\_

Q35 Approximately how much<strong> total time</strong> do you spend teaching integrated science content each week? (If you teach more than one class of students, answer with an average for just one of your classes.)

Less than 30 minutes

30 to 60 minutes

More than 60 minutes. If more than 60 minutes, please specify the amount of time.

---

Q36 What science topics do you cover when you teach integrated science content? Choose all that apply.

- Astronomy/Space Science
- Biology
- Chemistry
- Earth Science
- Nature/Environmental Topics
- Engineering
- Physics
- Weather and Climate
- Health
- Other \_\_\_\_\_



Q37 What resources do you use when you teach science? Choose all that apply.

- I use kits/curriculum from the school or school district
- I use kits/curriculum from the Education Service District
- I use a kits/curriculum from a STEM Hub
- I develop my own science lessons and curriculum
- I use curriculum and lessons that I get from other teachers in my school
- I use curriculum and lessons that I get from other teachers outside my school
- I use materials from internet sources (e.g., PBS Learning Media, Oregon Open Learning, Mystery Science, etc.)
- Other \_\_\_\_\_

Q38 How do you choose which science topics to teach/integrate? Choose all that apply.<br>

- I am guided by national (e.g., NGSS) or state standards
- I choose what I think is interesting
- I choose what I think will be interesting to my students
- I coordinate with other grade teachers on what to teach
- I use a given curriculum

Q39 What are some obstacles that prohibit or impede you from integrating science topics in your arts instruction?

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**End of Block: Block 12 - Music & Art Teacher Integrate Science Questions**

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**Start of Block: Block 13 - Music & Art Teacher Integrate Arts Questions**

Page Break

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Q40 During your teaching this past year, did you integrate other art topics with your regular art instruction? For instance, music and dance?

Yes

No

Q41 What other subjects did you integrate into your standard arts instruction? Please choose disciplines that you do not teach as part of your usual instruction.

Visual Arts

Music

Dance

Theatre

Media Arts

Q42 How often do you integrate other art topics in your arts instruction?

Each day

2-3 times per week

1 time per week

Every other week

Other \_\_\_\_\_

Q43 Approximately how much total time do you spend integrating other art topics in your arts instruction each week? (If you teach more than one class of students, answer with an average for just one of your classes.)

- Less than 30 minutes
- 30 to 60 minutes
- More than 60 minutes. If more than 60 minutes, please specify the amount of time.  
\_\_\_\_\_

Q44 In the past year have you participated in arts related professional development?

- Yes
- No

End of Block: Block 13 - Music & Art Teacher Integrate Arts Questions

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Start of Block: Block 14 - PE Teacher Science Integration Questions

Q45 During your teaching this past year, did you have a dedicated time in your schedule for teaching science topics integrated with your physical education instruction, for instance health topics?

- Yes
  - No
- 

Q46 How often do you integrate science topics in your instruction?

- Each day
- 2-3 times per week
- 1 time per week
- Every other week
- Other \_\_\_\_\_

Q47 Approximately how much total time do you spend teaching integrated science content each week? (If you teach more than one class of students, answer with an average for just one of your classes.)

- Less than 30 minutes
  - 30 to 60 minutes
  - More than 60 minutes. If more than 60 minutes, please specify the amount of time.
- 

Q48 What science topics do you cover when you teach integrated science content? Choose all that apply.

- Astronomy/Space Science
- Biology
- Chemistry
- Earth Science
- Nature/Environmental Topics
- Engineering
- Physics
- Weather and Climate
- Health
- Other \_\_\_\_\_

Q49 What resources do you use when you teach science? Choose all that apply.

- I use kits/curriculum from the school or school district
- I use kits/curriculum from the Education Service District
- I use a kits/curriculum from a STEM Hub
- I develop my own science lessons and curriculum
- I use curriculum and lessons that I get from other teachers in my school
- I use curriculum and lessons that I get from other teachers outside my school
- I use materials from internet sources (e.g., PBS Learning Media, Oregon Open Learning, Mystery Science, etc.)
- Other \_\_\_\_\_

Q50 How do you choose which science topics to integrate? Choose all that apply.<br>

- I am guided by national (e.g., NGSS) or state standards
- I choose what I think is interesting
- I choose what I think will be interesting to my students
- I coordinate with other grade teachers on what to teach
- I use a given curriculum

Q51 What are some obstacles that prohibit or impede you from integrating science topics in your physical education instruction?

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End of Block: Block 14 - PE Teacher Science Integration Questions

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Start of Block: Block 15 Physical Education Teacher Arts Integration Questions

Q52 During your teaching this past year, did you have a dedicated time in your schedule for teaching art topics integrated with your regular physical education instruction, for example dance?

Yes

No

Q53 What art subjects do you integrate into your physical education instruction? Choose all that apply.

Visual Arts

Music

Dance

Theatre

Media Arts

Q54 How often do you integrate art topics in your physical education instruction?

Each day

2-3 times per week

1 time per week

Every other week

Other \_\_\_\_\_

Q55 Approximately how much total time do you spend integrating other art topics in your physical education instruction each week? (If you teach more than one class of students, answer with an average for just one of your classes.)

- Less than 30 minutes
- 30 to 60 minutes
- More than 60 minutes. If more than 60 minutes, please specify the amount of time.

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Q56 What are some obstacles that prohibit or impede you from integrating art topics in your physical education instruction?

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End of Block: Block 15 Physical Education Teacher Arts Integration Questions

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Start of Block: Block 16 - Other Teacher

Q57 Please tell us your primary teaching responsibility in your school

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Q58 In your primary teaching job, do you have opportunities to integrate science instruction in your work?

- Yes
- No



Q59 How often do you integrate science topics in your instruction?

- Each day
- 2-3 times per week
- 1 time per week
- Every other week
- Other \_\_\_\_\_

Q60 Approximately how much total time do you spend integrating science topics in your instruction? (If you teach more than one class of students, answer with an average for just one of your classes.)

- Less than 30 minutes
- 30 to 60 minutes
- More than 60 minutes. If more than 60 minutes, please specify the amount of time.  
\_\_\_\_\_

Q61 What science topics do you cover when you teach integrated science content? Choose all that apply.

- Astronomy/Space Science
- Biology
- Chemistry
- Earth Science
- Nature/Environmental Topics
- Engineering
- Physics
- Weather and Climate
- Health
- Other \_\_\_\_\_

Q62 What resources do you use when you teach science? Choose all that apply.

- I use kits/curriculum from the school or school district
- I use kits/curriculum from the Education Service District
- I use a kits/curriculum from a STEM Hub
- I develop my own science lessons and curriculum
- I use curriculum and lessons that I get from other teachers in my school
- I use curriculum and lessons that I get from other teachers outside my school
- I use materials from internet sources (e.g., PBS Learning Media, Oregon Open Learning, Mystery Science, etc.)
- Other \_\_\_\_\_

Q63 How do you choose which science topics to teach/integrate? Choose all that apply.<br>

- I am guided by national (e.g., NGSS) or state standards
- I choose what I think is interesting
- I choose what I think will be interesting to my students
- I coordinate with other grade teachers on what to teach
- I use a given curriculum

Q69 What are some obstacles that prohibit or impede you from integrating science in your teaching?

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Q64 In your primary teaching job, do you have opportunities to integrate art instruction in your work?

Yes

No

Q65 What art subjects do you integrate into your instruction? Choose all that apply.

Visual Arts

Music

Dance

Theatre

Media Arts

Q67 How often do you integrate arts topics in your instruction?

Each day

2-3 times per week

1 time per week

Every other week

Other \_\_\_\_\_

Q68 Approximately how much total time do you spend integrating arts topics in your instruction?  
(If you teach more than one class, answer with an average for just one of your classes.)

- Less than 30 minutes
  - 30 to 60 minutes
  - More than 60 minutes. If more than 60 minutes, please specify the amount of time.
- 

Q70 What are some obstacles that prohibit or impede you from integrating art in your teaching?

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End of Block: Block 16 - Other Teacher

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