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BUILD-A-BODY

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Human anatomy students may be given a creative challenge in cooperative learning by asking them to "Build-A-Body," using only their lab partners as sources for measurements. Allow them as much latitude as possible in design and construction. As a result, they will be more aware of the correct proportioning of the human body and will more fully appreciate the complexity inherent in the human form.

If this assignment is begun on Day One of the school year, it will provide an opportunity for students to get to know one another and become involved in class from the first moment. This establishes the precedent for taking an active role in learning rather than passively learning and memorizing.

Assign each student to a team to produce one body. (Three or four member teams work best.) Research supports the team concept, suggesting that students who organize as a group to accomplish a common end are more likely to be successful (Slavin, 1982). Allow the team to work during classtime for three days and also have the opportunity to make arrangements to work before or after school.

The completed body must meet the following criteria:

1. It must be 30-45 cm in height.
2. It must be correctly proportioned.
3. It must approximate real human integument (skin color, real hair, etc.).
4. It can be male, female or "unsexed," but it must be correctly proportioned!

Give each team a ring stand and ring clamp from which to suspend the body, if they wish to do so. Large trays may be made available for those wishing to work horizontally. Metric tape measures, string, and scissors should be made available along with such tools as regular pliers, needle-nosed pliers and wire-cutters. All other desired materials must be supplied by the team members. The students may use anything they can find that will work to sculpt their bodies; suggestions include sculpture clay, home-made

play-dough and sculpted styrofoam. Styrofoam can be sculpted using sandpaper, but prepare for the mess. It helps to have a vacuum cleaner available.

Because it is inexpensive, the home-made play-dough is a favorite sculpting material, but it does get fairly heavy, and the students need to consider that when designing the body.

Home-made Play-dough Recipe:

2 c. flour 4 t. cream of tartar

2 c. water 2 T. oil

1 c. salt

Blend all ingredients in a pan. Cook about 3 minutes stirring constantly until it becomes a big lump. Knead about 5 minutes. Store in a plastic container. For one body, 2 or 3 batches may be required. Food coloring may be added during the kneading process.

When complete, the body must be given a name. The students are given a "Build-A-Body" score sheet that requests their names, the name of the body and a place for their evaluation scores. One side of the score sheet is a name tag that the students cut out, fill out and tag to their body. The name tag does not include the team members names, only the name of the body. An objective "outsider" (e.g., another teacher or the principal) is invited to help determine "best of the show" and help establish the "curve" for grading purposes.

The body which best meets the original criteria is given 100 points. All others are graded on that basis of comparison. Since the task is an interdependent one, an interdependent score is given based on the group product (Silvernail, 1986). A suggested scoring sheet looks like this:

Meets the height requirement	20 points
Is correctly proportioned	50 points
Has a realistic integument	15 points
Has a good overall appearance	15 points

Scoring categories are announced at the beginning of the project so that the students know what is expected.

The bodies are used in a subsequent lesson concerning descriptive words to be used in anatomy class throughout the year. The team must mark and label the body to show understanding of the following terms:

sagittal plane	anterior, posterior
coronal plane	superior, inferior
transverse plane	medial, lateral
distal, proximal	superficial, deep

All bodies may be displayed in the classroom, with the best being displayed in a public area.

This project promotes teamwork and allows great creativity and problem solving. It encompasses a variety of learning styles during the gathering of data and the construction of the model, making the lesson more effective (Reiff, 1992).

The results of this activity have been most rewarding. The bodies have been impressive, and at times, entertaining. The "best of the show" body may be donated by the class and used in following years as an example for future sculptors.

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