

Modeling: Endocytosis and Exocytosis

Materials Needed:

None

Activity:

1. Students form a circle holding hands. This is a great opportunity to point out the sidedness of membranes. Tell students they are to pay attention to which way they face. The front of them represents the cytoplasmic side of the membrane. The back of the students represents the environmental side of the membrane.
2. Have one student stand outside the circle as the particle to be ingested.
3. Have the students engulf the “particle” without releasing hands until the “particle” is fully surrounded. Engulfing students should have their back to the particle.
4. When surrounded, release hands and reform to form two independent circles, one around the “particle” and one surrounding this inner circle.
5. Ask students to identify the inner circle as the vacuole.
6. Ask students to identify the process as endocytosis.
7. Reverse the process and identify as exocytosis.