

STEAM Lessons

DIY Snowman



Age Group: K-38
Child/Adult Ratio: 6 to 1
Take Away Artifact: No
Approximate Time: 45 mins
Divisions Covered: All

Materials (per group of 3-4 students):
1 can of shaving cream, 4-5 cups of baking soda, a variety of materials to decorate a mini snowman (buttons, mini carrots, fabric, rocks, sticks...)

Simple Science: The “snow” feels cold due to an endothermic reaction, where the mixture absorbs heat from its surroundings, including your hands. This absorption of heat is what causes the snow to feel cool to the touch without needing to be refrigerated.

Skills Required for Completion of Task:

Motor skills

- Bilateral upper extremity coordination
- Ability to manipulate small objects
- Hand-eye coordination
- Ability to grip objects
- Ability to stabilize objects/task

Process/Cognitive skills

- Ability to attend to task for greater than 5 minutes
- Follow multi-step directions
- Ability to sequence steps
- Ability to understand safety precaution
- Ability to organize or keep materials organized for task
- Ability to adjust to different workspace requirements

Social skills

- Ability to communicate and share equipment with peers/staff appropriately

K-8 Standards:

3.PS1: Matter and Its Interactions. 2) Construct an explanation about the effects of heating and cooling a substance differentiating between changes that can be reversed (i.e., freezing & melting) and those that cannot (e.g., baking a cake or burning fuel).

This activity would be appropriate completed by the following disciplines:

Occupational therapy, LCSW, Family Services, Industrial Arts

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Instructions:

Add shaving cream to 3 cups of baking soda. Mix well. Add additional baking soda until you reach a snowlike consistency. Ask students if they notice a change in the temperature of the snow.

Build and decorate your snowman.



(For smaller amounts 1:1 baking soda and shaving cream and then make adjustments to get a clumping snowlike consistency)

Precautions: Baking Soda can irritate eyes. Use caution.