Holiday 3D Creation

In this fun, internet-based activity, kids can make their creative ideas a reality by creating a three dimensional holiday design to be printed on ALCOSAN's 3D printers!

Fun Facts/Information:

- Since the 1960s, computer-aided design (CAD) has been used to create 3D designs.
- Industries, including engineering, architecture, automotive, aviation, health care, arts, fashion, and even food, use 3D design to create products.
- The 3D printer was developed in the 1980s and became commercially produced only in the early 2000s. This allowed more people to make 3D creations on their own.
- Inkjet printers use ink to reproduce the image from the computer to the paper. The 3D printer creates objects using plastics, polymers, glass, or metal to create objects from a 3D design that are closely matched to the original object sought to be created.

Objective:

- Students will produce a holiday 3D design (such as an ornament, cookie cutter or small trinket decoration), using the cloud-based Tinkercad service to create and download their design for printing.
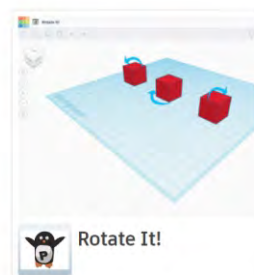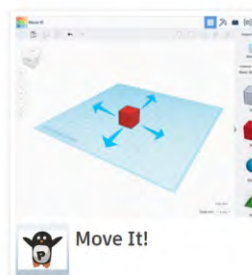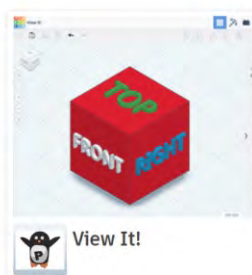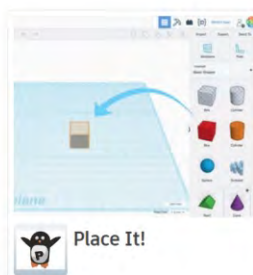
Materials:

- Paper
- Markers
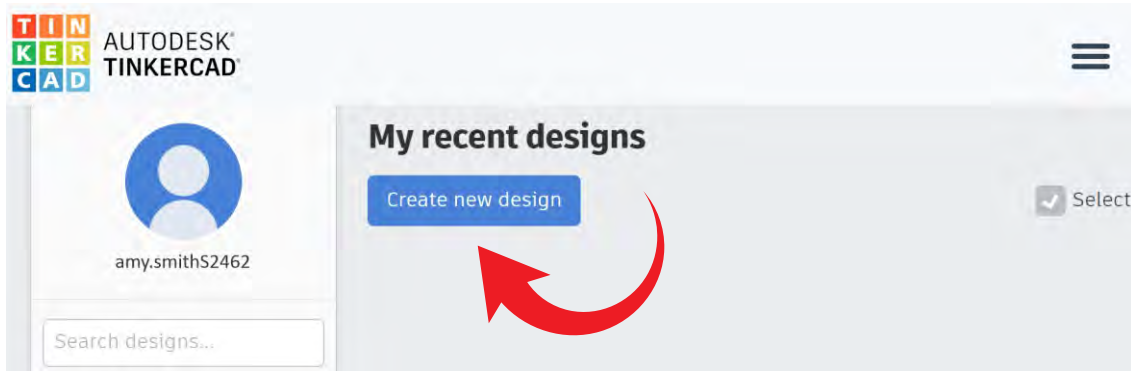- Computer with internet access

Procedure:

- Create an account on Tinkercad.com.
- Use the starters and lessons under the Learn tab to become familiar with the features of Tinkercad 3D design.

Starters define basic 3D design functions, and link to relevant Lessons to develop your skills.

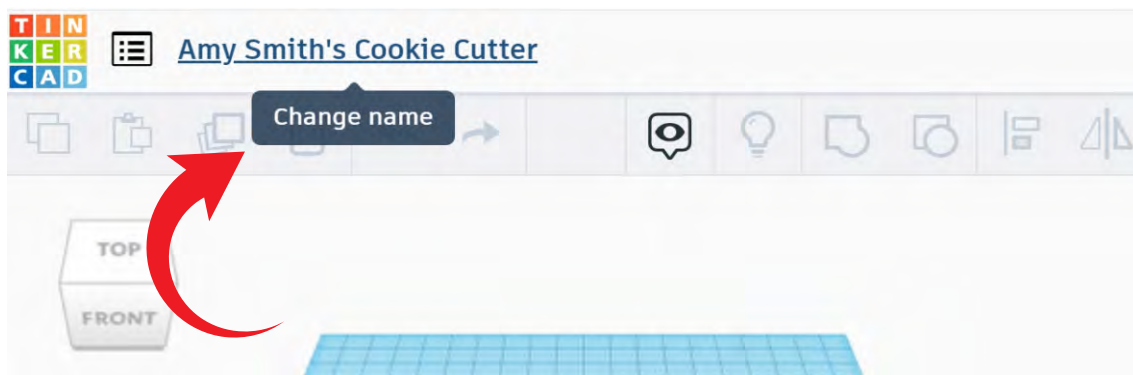Place It!   View It!   Move It!   Rotate It!

- Get ready to show ALCOSAN your holiday creativity using the following steps:
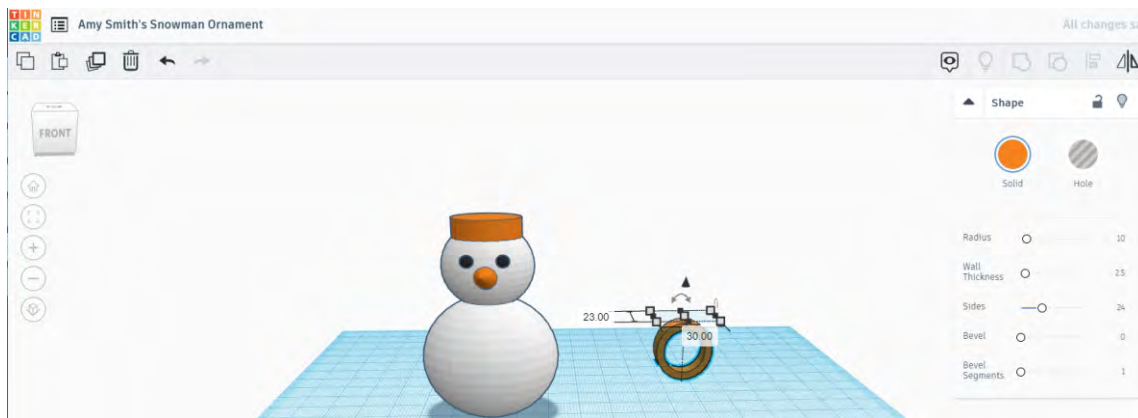
1. Create a new design.

2. In the top left corner, rename your design. Rename the file to include your first
and last names, followed by a description of your design—Example: Amy Smith's Snowman Ornament).

3. Design and create a holiday item. The options are endless, be creative! Design your idea on paper, then create it in Tinkercad and download the .stl file to your computer/device.

4. Email the .stl file to scholasticoutreach.alcosan@gmail.com

5. Complete the Google form via the link provided below. ALCOSAN Scholastic staff will print the design scaled to fit the capacity of the 3D printer on-site, then mail the finished product to the address that you provided in the form.

https://docs.google.com/forms/d/e/1FAIpQLSf8srrfSbc-0GR76Ggw5UQDIOpNGeBMrodxWNLd9lT5q2cLnA/viewform?usp=pp_url

For more activities, please visit us at www.alcosan.org/educational-activities.