

Grade 8 Snowflake-3D Printing

Objective: Students will create a snowflake using a 3D printing program. Students will use a variety of technologies with Tinkercad by creating imaginative solutions. Students will engage in a design process and employ it to generate ideas in how a snowflake can represent who they are in God's eyes.

Proc: Prayer, 10-minute typing warm up found in Google Classroom. Read "The Meaning of a Snowflake" poem to students. Discuss what a snowflake is and how it relates to a person (Each person is unique in God's eyes). Students will then sketch a snowflake design on graph paper. Review with students the rubric and expectations of the project. ([See attached rubric](#)). Once the design is approved on graph paper, discuss with students how to use the online 3D Printing Program, Tinkercad. Provide username and password for 8th grade account. Lesson will take 3-4 weeks to complete. Cross-curricular project ideas: Math & Science- snowflakes have six sides. All snowflakes contain six sides or points owing to the way in which they form. The molecules in ice crystals joint to one another in a hexagonal structure-each with one oxygen and two hydrogen atoms-to form together in the most efficient way. LA-Students can write an acrostic poem using their name. Students should use words and/or phrases to describe themselves. Optional: Print poem to attach to snowflake.

Assess: Joined classroom conversation, decisions followed class rules, left room as s/he found it, habits of mind observed.

Mat'ls : Computer, graph paper, Tinkercad

ISTE Standards 3. Knowledge Constructor-Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.



The Meaning of the Snowflake

Every new snowflake comes to the earth
as a picture of our Saviour's birth,
because they are sent from up above
and remind us of God's care and love.

Each one is so intricate and small
because Christ sees the details of us all,
and just as two are never the same

He knows and calls us each by name.

Snowflakes gently cover the world in white
and hide what's unlovely from our sight,
showing us how He covers our sin
and gives us His grace when we come to Him.

So may every snowflake bring Christ to mind
and in every bit of white may you find
a reason to celebrate anew
and a reminder of His love for you.

By Kolley Gerth

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