

PROJECT TITLE : MAKE A DIY CAN TELEPHONE

Unit	Unit 6 Go Green
Content standard	1.2 Will be able to listen and respond appropriately in formal and informal situations for a variety of purposes. 4.3 Will be able to plan, organize and produce creative works for enjoyment.
Learning standard	1.2.2 Able to listen, follow, and give instructions. 1.2.4 Able to participate in conversations with peers. 4.3.1 Able to plan, produce and display creative works based on literary texts using a variety of media with guidance.
STEAM Integration	Science - The study of sound. Technology - Build a telephone out of recycled tin cans. Engineering - Design recycled tin cans telephone. Art - Decorate the recycled tin cans. Mathematics - Measure the length of each string.
Equipment and materials	▪ Recycled tin cans (Make sure it's clean) ▪ Duct tape ▪ Hammer ▪ Nail ▪ Strings ▪ Scissors
Resources	▪ A sample video on how to build to a telephone using tin cans from the web. ▪ Website or articles related to tin can telephone.
Summary of activity	1. Students will watch videos and read detailed instructions on how to build a telephone using recycled tin cans. For example:- - https://www.youtube.com/watch?v=XPTTO4VeiWk - https://lemonlimeadventures.com/recycled-diy-can-telephones-simple-science-for-kids/ 2. Teacher will hand out questions related to recycling and pupils need to answer the questions. 3. Students will be separated into a few groups. 4. Each group need to prepare a few tin cans, duct tape, strings, and scissors. 5. Teacher needs to make a hole for each tin can using a nail and a hammer. 6. Then, they need to make a telephone out of recycled tin cans based on the instructions given earlier. 7. Pupil tests out how sound travels from point A to point B. 8. Pupil can adjust the length of the string to get different hearing experience.
Knowledge, Skills and Values	▪ Improve the student's creativity and innovative skills. ▪ Experiment with sounds. ▪ Discover how sounds travel according to the length of the strings. ▪ Listen, respond, and follow instructions appropriately.
Experience acquired by students	▪ Design and make a telephone using recycled tin cans. ▪ Use recycled items to produce innovative products.

PROJECT TITLE : BUILDING FLOOD BARRIERS

Unit	Unit 10 Be Aware, Take Care!
Content standard	1.2 Will be able to listen and respond appropriately in formal and informal situations for a variety of purposes. 4.3 Will be able to plan, organize and produce creative works for enjoyment.
Learning standard	1.2.2 Able to listen, follow, and give instructions. 1.2.4 Able to participate in conversations with peers. 4.3.1 Able to plan, produce and display creative works based on literary texts using a variety of media with guidance.
STEAM Integration	Science - Determine which material is the most absorbent. Technology - Design a flood barrier using limited materials. Engineering - Run the process of building a flood barrier. Art - Draw the flood barrier. Mathematics - Record the time for each paper house to get wet.
Equipment and materials	▪ Square plastic basins ▪ Water ▪ Sponges ▪ Sand ▪ Play-doh/Plasticine ▪ Paper houses ▪ Other suitable absorbent materials
Resources	▪ A sample video on how to build flood barriers from the web. ▪ Website or articles related to flood.
Summary of activity	1. Students will watch videos and read detailed instructions on ways to prevent flood. For example:- - https://www.youtube.com/watch?v=HN8gwntBI20 - https://www.teachersareterrific.com/2015/11/whats-going-on-in-lab-flood-barriers.html 2. Teacher will hand out questions related to the causes and effects of flood. Pupils need to answer the questions. 3. Students will be separated into a few groups. 4. Each group will be given different materials to design their flood barriers. 5. Then, pour water in the basin to test for absorbency. The paper house must not be wet 10 seconds after water are poured into the basin. 6. Determine which material is the most absorbent.
Knowledge, skills and values	▪ Improve creativity skills. ▪ Build a flood barrier using limited materials. ▪ Learn how to work in teams. ▪ Listen, respond, and follow instructions appropriately.
Experience acquired by students	▪ Improve their innovative skills. ▪ Design flood barrier. ▪ Learn engineering skills.

PROJECT TITLE : MAKE A LAVA LAMP

Unit	Unit 11 Tailor Made
Content standard	1.2 Will be able to listen and respond appropriately in formal and informal situations for a variety of purposes. 4.3 Will be able to plan, organize and produce creative works for enjoyment.
Learning standard	1.2.2 Able to listen, follow, and give instructions. 4.3.1 Able to plan, produce and display creative works based on literary texts using a variety of media with guidance.
STEAM Integration	Science - Study the basic science skills. Technology - Create lava lamp. Engineering - Run the process of making a lava lamp. Art - Use food colouring to create a beautiful lava lamp. Mathematics - Measure the right amount of each ingredient to make a lava lamp.
Equipment and materials	▪ Empty bottle ▪ Water ▪ Vegetable oil ▪ Food colouring ▪ Fizzing tablet
Resources	▪ A sample video on how to make lava lamp from the web. ▪ Website or articles related to lava lamp experiments.
Summary of activity	1. Students will watch videos and read detailed instructions on how to make lava lamp. For example:- - https://www.youtube.com/watch?v=PJgavti1ajl - https://www.stemlittleexplorers.com/en/make-lava-lamp/ 2. Students will be separated into a few groups. 3. Each group will be given the materials needed to make a lava lamp. 4. Follow the instructions and measure the proper amount of each ingredient to make a lava lamp.
Knowledge, Skills and Values	▪ Learn the basic knowledge of science. ▪ Experiment with various materials to create a lava lamp. ▪ Listen, respond, and follow instructions appropriately.
Experience acquired by students	▪ Improve creativity skills. ▪ Understanding the element of science through this project.