



Science Technology Engineering Art Math

*Create Discover Explore*

**The Center for Developing Excellence STEAM Academy**

**We emphasize the FUN in teaching the FUNdamentals!**

## Alien Artifacts

**Cost – in Dollars (not counting basic lab supplies and technology equipment if necessary):**

\$ -- 0-25

\$\$ -- 25-50

\$\$\$ -- 50-100

\$\$\$\$ -- OVER 100

**Objectives:** Students will...

- Use their critical thinking skills to analyze “strange” artifacts from an alien civilization.
- Incorporate as many of their senses as possible in the examination of the artifacts.

**Time Required:** 1 - 45 minute class period

**Materials (For class of 20 students working in groups of 2):**

- Bottle of spray perfume
- Box of strike anywhere matches
- 60 birthday candles

- Roll of aluminum foil
- 20 small squares (2 inch by 2 inch) of typing paper
- 10 magnifying glasses
- 10 metric rulers
- 2 different candy making scents
- Red and blue markers
- 10 tweezers
- 20 pairs of safety glasses
- Ultraviolet flashlight with UV markers (Amazon)
- 20 copies of *Student Data Table*

**Optional Equipment:**

- Alien mask and white Tyvek suit (Amazon)
- “Close Encounters” soundtrack (iTunes)
- Model of flying saucer (Amazon)
- Computer
- Computer projection system with speakers or SMART board

**Procedure:**

PREP

- Prepare 10 sets of materials each containing:
  - 1 large sheet of aluminum foil with “strange” symbols etched into it (you can determine your own code).

**Note: You will rap all of the other materials inside the aluminum foil, and it will act as a surface for the burning of any materials**

- 2 safety matches, one with its wood end colored red, and the other one blue.
- 1 (2 inch by 2 inch) piece of typing paper with the word “hi” written with UV markers on one side, and the number 7 written very small in pencil in the corner of the other side. Spray the paper with perfume.
- 2 candles, one dipped with one candy scent, and the other dipped with a second candy scent.

IN CLASS

- Have the students form groups of two.
- Tell the students a story on how you were visited by a strange flying craft last night that dropped off several strange packages. (Optional: play sound effects from “Close Encounters” and have a parent or teacher volunteer deliver the packages during your story (see attached video)).
- Have the students put on their safety glasses.
- Give each group a set of alien artifacts.
- Pass out a magnifying glass, metric ruler, and tweezer to each group.
- Explain to the students that they must make as many scientific observations on these “strange” artifacts as possible using all of their senses and the

equipment provided. They are to record all of their observations in their *Student Data Table*.

**Note: Do not let the students burn any of the artifacts until you feel they have made sufficient observation on them before burning. Monitor the burning of the artifacts closely. If your school does not allow the burning of materials in your science class, or if you do not feel confident that you can do this safely, do not let the students burn the materials or do the burning as a demonstration. You could also monitor each group as they burn the materials under a fume hood.**

**Assessment:**

- Successful completion of the *Student Data Table*
- Use of their senses and critical thinking skills

**Video:** <https://www.youtube.com/watch?v=3Zz7roNvMHI>

## Student Data Table

Before Burning	During Burning	After Burning