

Claymation Metamorphosis

(art + science, art + technology)

Making "stop-action" or frame-by-frame animations has never been easier or more relevant. Students are familiar with many high-quality films and cartoons using manipulated clay characters, and this lesson plan will introduce them to the basic techniques and processes of media production.

Starting with a storyboard plan, students will build characters and film their actions one frame at a time with a digital camera. The frames will then be assembled in a software program and played in succession without time lapse between them to make a movie.

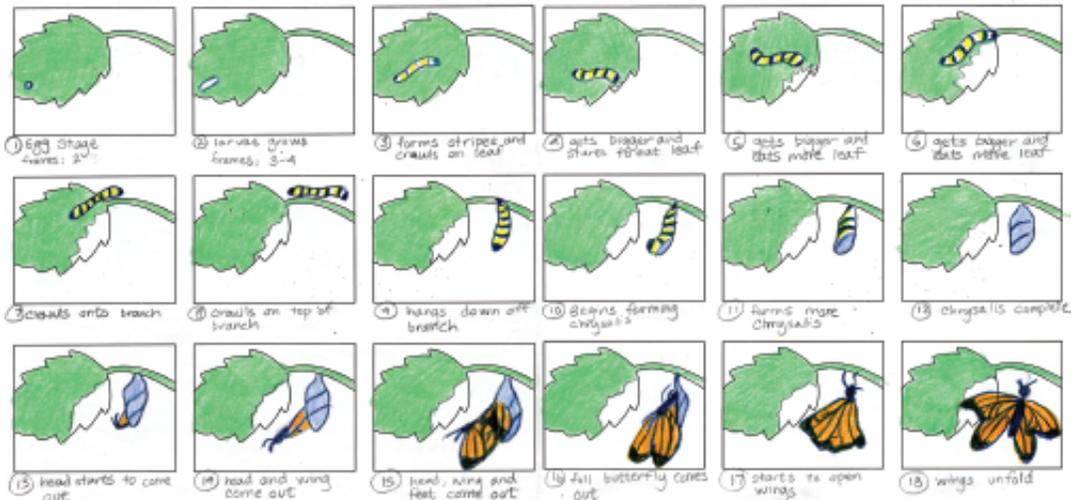
This lesson plan connects visual problem-solving with a familiar scientific theme — the metamorphosis of a butterfly. Any theme can be adapted to the steps outlined below. Because of the complexity of this project, allow 8 class periods and have students work in groups. The finished movie can be copied on CDs for everyone in the class.

Grade Levels 5-12

Note: instructions and materials based on a class of 25 students. Adjust as needed.

Objectives

- Students will learn to communicate their ideas and imagery through a visual technique popular with mass media
- Students will gain an understanding of the planning and production



Materials

Van Aken® Claytoon Sets, Neutral (33227-0049) and Hot (33227-0059) colors, one of each per project

Twisteez Wire (33407-1050), one wire per project

Blick Premium Cardstock, Holiday Green (11408-7099), one sheet, cut to 9" x 12"

Blick Student Watercolor Paper (10028-2158), cut to 9" x 12"

Crayola® Educational Watercolor Set (00309-1009), share 6 sets across classroom

Sargent Art® Colored Pencils (22046-1012), share 6 sets across classroom

Digital Camera, Tri-pod

Desk lamp

Computer with Microsoft® PowerPoint®, Adobe® Photoshop®, Adobe® Image Ready®, Apple® iMovie® or other software program with animation capabilities



Objectives, continued

required for claymation animation

- Students will be able to connect their ideas and visual art skills to communications in other subjects, such as math, science and literature
- Students will learn to manipulate modeling clay over a wire armature to provide animation to a character

Preparation

1. Design a simple set area in which the Metamorphosis will take place. In this example, a watercolor background and leaf shape cut from cardstock is all that is needed for the set. Depending on age level, have students design the set or prepare it for them in advance. Larger sets will require more materials, so keep it about 9" x 12", with as much depth as needed.
2. Make a frame template based on the set, about 3" x 4" frame size, make multiple copies. Allow room for written dialogue.
3. Make another template the same size as the set; have multiple copies available.

Process

1. **Storyboard:** Divide class into teams of six and have two students on each team responsible for planning a stage of development — the egg and larvae stage, pupa (chrysalis) and adult stage. Use six templates per stage and draw with colored pencils, in order, what takes place in that stage and how they imagine the movement to evolve. Individual action frames are not necessary — templates may represent what will actually be multiple frames in the animation.
2. **Characters:** Teams will create the characters using the set-sized template for accurate proportions. Use a non-hardening modeling clay. Claytoon is bright, very easy to work and doesn't leave oily stains.

The young larvae can be simple clay shapes.

For the mature larvae (caterpillar), form five 1/8" dia balls of black, white and yellow. Flatten to a disk. Bend a loop on one end of a 4" Twisteez wire and thread the disks on in sequence. This will make it easy to bend for a crawling motion. Because the mature larvae will be in many

Process, continued

frames and will have clay wrapped around it for the chrysalis, it's a good idea to make an "understudy" or two.

For the pupa stage, plan to wrap clay around the mature larvae during filming.

For the adult butterfly, make two versions: one with folded wings as it emerges from the chrysalis and one with extendable wings. For the extendable wings, bend the wire into wing shapes and mold the clay over the top.

3. **Studio:** Position digital camera on a tripod, shooting straight down. Turn off flash and auto focus. Use a low resolution setting. Remember that the camera has to remain in the same position. If there's a chance it might get moved, mark exact positioning on the floor with tape. Place set beneath and tape to table surface or floor so that it doesn't move. It's best to shoot in a darkened room, using a directional light source, such as a desk lamp, to illuminate. The lamp will need to stay in the same place as well.
4. **Film:** Capture the Metamorphosis, one frame at a time, making small adjustments to the characters between frames. The more frames, the smoother the transitions.
5. **Animate:** Upload digital images into a computer software program:
 - Powerpoint — Insert the pictures into Large Photo Slides, (found in the Formatting Palette under Change Slides). On the Transition Palette, (a drop-down selection from Slide Show), set slides to change automatically every 0 seconds. Do not use mouse click or transition effects and apply to all.
 - Adobe Photoshop or ImageReady — assemble images as layers. Use the animation palette to make frames from layers. Set transition to 0 seconds and loop once.
 - iMovie — import photos as clips. Assign a time frame of .01 seconds to each clip. Do not apply transitions.Many other programs are available that will work as well. Adjust to your current technology.

Options

- Add music and frames giving credits to the creators of the movie
- Choose other themes involving Metamorphosis or transition in science and nature: the life cycle of a flower, frogs, seasons, the solar system, etc.

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National Standards

Content Standard #1 — Understanding and applying media, techniques and processes

5-8

Students intentionally take advantage of the qualities and characteristics of art media, techniques, and processes to enhance communication of their experiences and ideas

9-12

Students apply media, techniques, and processes with sufficient skill, confidence, and sensitivity that their intentions are carried out in their artworks

Content Standard #3 — Choosing and evaluating a range of subject matter, symbols, and ideas

5-8

Students integrate visual, spatial, and temporal concepts with content to communicate intended meaning in their artworks

9-12

Students reflect on how artworks differ visually, spatially, temporally, and functionally, and describe how these are related to history and culture

Content Standard #6 — Making connections between visual arts and other disciplines

5-8

Students compare the characteristics of works in two or more art forms that share similar subject matter, historical periods, or cultural context

9-12

Students compare the materials, technologies, media, and processes of the visual arts with those of other arts disciplines as they are used in creation and types of analysis