Animating With
Make a Movie

Lesson Plan and
Supporting Documents

Questions?
Contact us at 303-551-7220
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Please be sure that all of the computers that will be used to explore Kerpoof are equipped with Flash 10. Kerpoof.com will NOT work without Flash 10.  

You can download Flash 10 at no cost by visiting http://www.adobe.com/products/flashplayer/.
Educational Standards Met by Kerpoof

Technology Standards
This Kerpoof Animation Lesson Plan meets several educational standards for technology, including benchmarks from Project 2061: Benchmarks for Science Literacy, International Baccalaureate: Design Technology and the International Technology Education Association: Standards for Technological Literacy as well as the National Research Council: National Science Education Standards and the International Society of Technology in Education: National Educational Technology Standards for Students.

Grades 3-5
Understands the nature of technological design
- Knows that the design process is a series of methodical steps for turning ideas into useful products and systems
- Identifies a simple problem that can be solved using technology
- Knows constraints that must be considered when designing a solution to a problem (e.g., cost, materials, time, space, safety, scientific laws, engineering principles, construction techniques, appearance, environmental impact, what will happen if the solution fails)
- Uses appropriate tools, techniques, and quantitative measurements to implement proposed solutions

Understands the nature and operation of systems
- Knows that when things are made up of many parts, the parts usually affect one another
- Knows that things that are made of parts may not work well if a part is missing, broken, worn out, mismatched, or misconnected
- Understands the relationships between elements (i.e., components, such as people or parts) in systems
- Assembles, disassembles, and tests systems (e.g., in logo programming, using paper and pencil designs)

Grades 6-8
Understands the relationships among science, technology, society, and the individual
- Knows that scientific inquiry and technological design have similarities and differences (e.g., scientists propose explanations for questions about the natural world that are always tentative and evolving, and engineers propose solutions relating to human problems, needs, and aspirations; both science and technology depend on accurate scientific information and they cannot contravene scientific laws)
- Knows that science cannot answer all questions and technology cannot solve all human problems or meet all human needs

Understands the nature of technological design
- Knows that the design process is a slow, methodical process of test and refinement
- Knows that the design process relies on different strategies: creative brainstorming to establish many design solutions, evaluating the feasibility of various solutions in order to choose a design, and troubleshooting the selected design
- Identifies appropriate problems which can be solved using technological design (e.g., identifies a specific need, considers its various aspects, considers criteria for a suitable product)
- Designs a solution or product, taking into account needs and constraints (e.g., cost, time, trade-offs, properties of materials, safety, aesthetics)
- Implements a proposed design (e.g., organizes materials and other resources, plans one's work, makes use of group collaboration when appropriate, chooses suitable tools and techniques, works with appropriate measurement methods to ensure accuracy)
- Evaluates the ability of a technological design to meet criteria established in the original purpose (e.g., considers factors that might affect acceptability and suitability for intended users or beneficiaries; develop measures of quality with respect to these factors), suggests improvements, and tries proposed modifications
- Understands that nonphysical objects (e.g., software) and physical objects (e.g., a telephone) are both subject to the design process

Thinking and Reasoning Standards
This Kerpoof Animation Lesson also meets standards for thinking and reasoning from the Consortium of National Arts Education Associations: National Standards for Arts Education; Center for Civic Education: National Standards for Civics and Government; Core Integrated Technical and Academic Competencies for Career-Focused Education; plus state standards in Wisconsin, Michigan, Oregon, Texas and Virginia.

Thinking and Reasoning – Grades 6-8
Applies basic trouble-shooting and problem-solving techniques
- Generates alternative courses of action and compares the possible consequences of each alternative
- Selects the most appropriate strategy or alternative for solving a problem

Center for Civic Education: National Standards for Civics and Government; Core Integrated Technical and Academic Competencies for Career-Focused Education; plus state standards in Wisconsin, Michigan, Oregon, Texas and Virginia.
Title: Kerpoof Introduction to Animated Movie Making

Topic(s): computer literacy, computer programming, writing, pre-writing, public speaking, problem-solving

Grade level: 3-8 (the lesson is largely the same, the difficulty varies according to the complexity of the stories they write and the sophistication of their animated scenes)

Student Assignment: Choose a set of characters and pre-write a short story for them, then program the Kerpoof Animation Studio to animate the story and make a 30-second movie.

Educational Standards (Based on information from McRel Compendium):
See attached sheet of standards met, including benchmarks from:
- Project 2061: Benchmarks for Science Literacy,
- International Baccalaureate: Design Technology
- International Technology Education Association: Standards for Technological Literacy
- National Research Council: National Science Education Standards
- International Society of Technology in Education
- National Educational Technology Standards for Students
- Council for Basic Education: Standards for Excellence
- National Assessment for Educational Progress: Writing Achievement Levels-Setting Process
- National Council of Teachers of English: Standards in Practice: 3-5 and 6-8
- New Standards for Elementary and Middle School
- International Baccalaureate for Primary and Middles Years
- State standards from California, Massachusetts, Mississippi, Texas, Utah and Virginia

Materials and Resources provided by Kerpoof:
- Educator tutorial
- Step-by-step classroom demonstration
- Script for introducing and wrapping up the activity
- Student Checklist (to be copied/passed out)

Set-up:
- Read through the educator tutorial.
- Print and copy the materials provided.
- Have each computer in the lab turned on with the Kerpoof home page already up on the screen.
**Kerpoof Animation Lesson Plan**

**Tasks/activities:**

*NOTE — This activity can be split into two class periods: one in which students explore the tools, choose their characters, and then write their story outside the lab (either in class or as homework); the other in which they program and edit their story. If you are lucky enough to teach a block class, you can do everything in one class period, including the introduction.*

Be sure to schedule ample time for each stage of the activity.

**0:00-0:05**

Take the first five minutes of class to get settled.

**0:05-0:10**

Lab time begins with a five minute teacher demonstration of Kerpoof Make a Movie. Use the provided instructions for an easy and relatively complete demonstration of the capabilities and tools.

**0:10-0:30**

Pass out the student checklist. Students can pick from two to three story starters for two scenes. They will be asked to:

- Choose characters and drag them into the playback window
- Think through and outline their story using prewriting strategies
- Place waypoints
- Select methods
- Add up methods and any pauses between them to make sure their movie will be exactly 30 seconds long. Remind them that simultaneous methods (things that happen at the same time) won’t count toward their 30 seconds.

**0:30-0:35**

Ask students to test their animation in an ordered manner:

- First play: Just watch
- Second play: Watch for parts that didn’t turn out the way they planned or things they want to change
- Third play: Write down the changes they want to make

**0:35-0:40**

If students have changes they want to make, have them do so. If they like what they’ve done so far they can add to their scene.

**0:40-0:45**

As the class is ending (or back in the classroom) wrap up the activity using the script provided for follow-up.
The Kerpoof Studio Integrated Development Environment has four main tool areas. See the descriptions and figure below for a quick tour of the application.

**Control Buttons**
- These tools will allow you to delete everything from the scene, save objects you might want to use later, add text to your scene, add a personally drawn object, add another scene to your movie, save, print or e-mail your movie.

**Scene Builder and Playback Window**
- The open scene is the “movie set” where the animated story will take place
- Library of objects to the right of the scene includes the characters and objects for the scene
- Characters and objects enter the scene through a drag-and-drop system
- Waypoints direct the movements of characters (Visible in the scene while working, invisible when playing)
- The Special Effects tool directs the placement of special effects like lightning, smoke, bubbles, etc.
- Play/reset button allows users to play their animations

**Action Window**
- Objects in the scene are selected (appearing in an orange halo in the scene builder window)
- Methods (possible actions) for the selected object appear in the Action Window, including “Move,” “Say,” “Look Around”
- If no object is selected, the action window shows only the methods available for the scene itself, including tools to add music, titles, weather effects, and “fade to black.”

**Timeline window**
- Drag methods from the Action Window to the timeline to program the movie
- Dialogue boxes appear when methods are added to the timeline to help users determine certain properties (such as duration and associated text)
- Each method is color coded on the timeline for easy recognition
- Eight timelines allow users to program up to eight concurrent actions

**Diagram Description**
- **Scene Builder and Playback Window**
- **Timeline Window**
- **Control Buttons**
- **Special effects**
- **Characters/Objects**
- **Waypoint**

*DO NOT click the done button unless you have already saved.*
Kerpoof Make a Movie Classroom Demonstration

Step 1: Getting Started
We’re on the Kerpoof home page. Today we’re going to make a movie, so I’m going to click here:

Step 2
- I’m going to pick my storyline. There are a lot of choices, so make sure you scroll through all of them to find one you like. I’m going to choose Pets Land.

Step 3
- Now I pick my scene. I have several choices. I’m going to pick the park.

Step 4: Choosing Characters
- Let’s make a little movie about a fish and a cat.
- Hold down your mouse button while you drag the cat into the scene, and let go when you have him where you want him. Repeat this step with the fishbowl.

Step 5: Resizing an Object
- These characters are a little big, so I’m going to resize them. See the arrow button to the left of the fishbowl? Click and hold the mouse button while you drag to resize.

Step 6: Positioning Objects
- I’m going to leave the fish right here, but I want the cat to start out back here, near the bench.
- I’m going to select the cat by clicking on him. See how he gets an orange glow when he’s selected? I’ll grab the shadow beneath him and push him towards the bench.

Step 7: Adding Action
- This little tool is called a “waypoint” because it will point the way for our characters.
- If you bring a character into your scene and decide that you DON’T want them in your scene after all, just click-and-drag them out of the scene, and they’ll disappear.
- I want the cat to walk over and visit with the fish, so I’ll drag the waypoint icon right here. See how the letter A appears above it?”

Checkpoint
Kerpoof Make a Movie Classroom Demonstration

Step 8
- Now I am going to program my movie. I will start with the cat by clicking on him.
- Look at the Action Window underneath the scene. It shows a list of “methods,” which are all the things I can ask the cat to do. He can move, say something, run, do periscope tail, stretch or look scared.

Step 9
- First I’ll click-and-drag the Move button onto my timeline.
- When the button is placed on the timeline, a dialogue box will open so that I can change the method’s properties:
  1. “Duration” lets me change how long this action will last. It says 2 seconds right now, but I want the cat to walk faster. I’ll change it to 1 second.
  2. “Destination” lets me choose the waypoint I want him to move to. It says A and that’s where I want him to go, so I’ll leave that.
  3. If I want the cat to walk slower or move to a different waypoint, I can always reopen the dialogue box by clicking the Move button in the timeline.

Step 10
- Next I want the fish to do something, so I’ll select him.
- When the cat comes over, I want the fish to make a puffy face, like he’s sneezing. So I’ll drag the Puffy Face button onto the timeline and put it just under the cat’s Move method.
- Here’s duration again. I’m going to say that I want him to sneeze for 1 second.

Step 11
- The sneeze scared the cat, so I want him to Look Scared. I’m going to drag the cat’s Look Scared button onto the timeline below the fish’s Puffy Face method.
- Here’s my dialogue box. I’m going to have the cat Look Scared for 1.5 seconds.

Step 12: Adding Words
- Next I’m going to drag the fish’s Say method to the timeline.
- I want him to say, “Sorry! I’m allergic to cats.” I’ll type that into the Message box. I’ll have him say it for 2 seconds.
Step 13: Viewing
- Let's watch the movie so far. I'm going to click on the play button here and we can see what happens.

- Here comes the cat. Oops, the fish sneezed. The cat sure was scared!

- Look over here to the right and you can see that the timeline is following the action, highlighting the methods as they play. See, now the fish is apologizing.

Step 14: Going Back
- To reset your scene, click this "reset" button. Now you can watch the movie over again.

Checkpoint
- See how the methods for the cat are grey and for the fish they're brown? That helps you see who you're working with.

Step 15: Multiple Methods
- My first example only used one of the timelines, but there are eight available. I can use them if I want more than one thing to happen at the same time.

Step 16
- I'm not sure everyone will know that the fish is sneezing, so I want the fish to say "Achoo!" I'll drag the fish's Say method over to the timeline, but this time I'm going to put it BESIDE where he's doing the Puffy Face.

Step 17
- Here's my dialogue box. I want him to say "Achoo!" for 1 second, exactly as long as he's doing the Puffy Face.
- Let's play it again and see the change.
- I can move the Say method up and down in the timeline, depending on when I want the words to appear.
- I like my movie so far, but I want Spooky Cat to have more adventures.

Step 18: Adding a Scene
- We can add another scene to our movie. Just click on the filmstrip tool on the left.

Step 19
- Now I've got a dialogue box that shows the scene I already have. Clicking "Done" without saving will cause you to lose all your work.

Step 20
- Here's another dialogue box that lets me pick my next scene. I'm going to have Spooky Cat go to the beach. See how it's been added to my list of scenes?
Step 21
- This time Spooky Cat will be visiting the beach. I’ll drag him into the scene.
- There are several Stage Methods that will make my scene even better. Let’s look at those. Notice that the Stage Methods appear in the Action Window automatically when none of the characters are selected.

Step 22: Adding a Title
- I’m going to start this scene with a title, so I drag that method to the timeline. Here’s my dialogue box. I can change the Duration if I want to, but I’ll leave it at 2 seconds. I’ll also type in my title: “Spooky Cat at the beach.”

Step 23: Adding Music
- I can also put music in my scene using the Start Song method. I drag that to second timeline because I want it to start when the title appears. Then I get a dialogue box that lets me decide which genre of song I want. Next I choose the song and how long I want it to play.
  - If your speakers are turned on you can preview the songs to decide which one to play. Be sure to keep your speakers or headphones turned down so you don’t bother your classmates.
  - I want the song “Sunset Road” to play for the entire scene, so I select the “This scene only” option. If I wanted it to play over all my scenes, I’d choose “Whole Movie.” If I wanted it to play over only part of this scene, I’d choose “Duration.”

Step 24
- Spooky Cat thinks it’s going to rain. I think he’s right. I’m going to drag the Weather method to the timeline. Next I’ll choose rain from the drop-down menu. I want it to rain for 5 seconds. There.

Step 25: Adding Special Effects
- Now I’m going to add a special effect to the scene. I’ll drag the Special Effects tool right over the cat’s head.
- See, the Special Effects methods have shown up in the Action Window. I’m going to drag the Lightning method into the timeline and choose a duration.

Step 26: Saving Your Work
- In order to save your work, you MUST click on the Save icon on the left of your screen. Do not click “Done” before saving!

Getting the students started:
- Now you’re ready to create your own movies. I’m handing out a checklist of things your movie should include, and some story ideas.
- Go ahead and turn on your monitors. Kerpoof is already up on your screen.
- You will have five minutes to choose your scene and characters.
- Then you will have five minutes to write down your story on your sheet here. Your story will be really, really short, just one or two sentences.
- Then you will have ten minutes to program your movie. It took me just five minutes to create that story while I was showing you.
- After that you will play/test your movie.
- I will let you know when it is time to start the next step.
- Ready?
Introduction/Wrap-up script for Kerpoof Movie Making

Note: This is a sample script you can use to introduce this activity to your students and also to wrap up the activity. It employs a classic KWL, activating prior knowledge and an interest in learning more, plus cementing new knowledge with a review of what was learned through the activity.

Introductory script:
Have you ever wondered what makes computers do what they do when you:
- Play a game
- Watch a cartoon or movie
- Work in software like Microsoft PowerPoint or Word

None of these things just happen—computers can only do what humans tell them to do. Someone had to PROGRAM the movie or game to do each of these things. Once someone programs a movie/game, they can share the movie/game with everyone.

Let’s talk about what you know about computer programs.
- What is a computer program?
- How does a computer program get on your computer?
- Who makes/creates computer programs?
- Other questions/topics that come up

How many of you would like to learn more about computer programming?

Computer engineers and computer scientists write computer programs. They have to be creative. They also have to know the right language and steps to write a program. They think about what they want a computer to do and then they make a plan to realize it.

What would you like to learn about computer programming?

You are going to use Kerpoof to “program” your computer to play an animated movie that YOU create.

Wrap-up script:
You may think that you’ve just created a movie, but what you’ve actually created is a computer program. What you just did isn’t that different from what was done to create [ELEMENTARY SCHOOL say “Club Penguin” MIDDLE SCHOOL say: “OriginalIcons.com or even animated music videos”]

If your program didn’t turn out exactly how you wanted it to, don’t worry. Many computer programmers spend days or even weeks creating their animations.

Let’s talk about what we’ve learned with this activity. [Discussion]

Let’s talk about what else you’d like to learn about computer programming. [Discussion]
Make a Movie — Student Checklist

- Choose your storyline.
- Choose your scene.
- Look at the characters you can use in your scene.
- Drag 2-4 characters you want to use into the playback window.
- Look to see what actions (methods) each character can do.

You should use **at least three** actions (methods), but **no more than twelve**.
Check off each kind of action/method when you use it:

- Say method
- Move method
- Rotate method
- Emote method
- Special method (zap fly, look around, look scared, do kung fu, etc.)
- Stage method (title, song, weather, etc.)

**After you have planned your story:**

- Place your characters where you want them to be when the movie starts.
- Place waypoints in your scene to help the characters find their way to the points where you want them to go.
- Click-and-drag methods into the timeline to tell your story. Be sure to use the dialogue boxes to tell the computer how long you want the action to continue and where or what you want it to do.
- When I tell you it’s time, test your program. Watch your movie three times.
  - First play: Just watch what you made. Isn’t it great?!
  - Second play: Do you see anything you want to change?
  - Third play: Write down your changes and how to make them.
Frequently Asked Questions about Kerpoof

Questions from Teachers

Why do I get an error message asking me to install Flash 10 when I bring up Kerpoof?
Kerpoof requires the installation of Flash 10. It is easy and free to install. Just visit the Adobe Flash homepage at http://www.adobe.com/products/flashplayer/. From there you can download and install what you need to use Kerpoof.

Who can I contact at Kerpoof for help using the web site?
You can contact Alexandra Munck, Associate Producer at 720-220-7824 or Alexandra.x.Munck-ND@kerpoof.com if you have questions about using Kerpoof.

What does it cost for a school to use Kerpoof in the classroom?
The use of Kerpoof and the educator resources at Kerpoof Scholastics (www.kerpoof.com/teach) are FREE for all schools and educational institutions. Educators who want to have free access to subscriber tools (the ability to allow your students to use group features, chat and more) can e-mail contact.us@kerpoof.com.

Do all my students need a username/password to use Kerpoof?
We advise educators to have all students create an account, only because students cannot save their work if they are not logged in. However, it is possible to use Kerpoof without a username and password if students are not interested in saving or e-mailing their work.

How else can I use Kerpoof in my classroom?
You can visit Kerpoof Scholastics (the Kerpoof educator resource page) for more ideas and resources, including lesson plans, ideas, a free e-newsletter and more. Just visit www.kerpoof.com/teach.

What educational standards can be met using Kerpoof?
There are many education standards that can be met using Kerpoof in the classroom. See page 3 of this document for an overview of some of them. You can also find some state standards and other national standards at Kerpoof Scholastics (www.kerpoof.com/teach).

Questions from Students

What are these Kerpoof Koins that I get for doing certain things in Kerpoof?
Kerpoof Koins are saved in accounts of anyone with a Kerpoof username and password. They can be used to buy avatar accessories, scenes, characters, pens, and much more in the Kerpoof Store.

Why can’t I use the storylines called Crag Rock, Pirates of Awesome and The Theater?
These storylines must be purchased in the Kerpoof Store using Kerpoof Koins. Anyone who has earned enough Koins can buy The Theater, but only Kerpoof subscribers can buy Crag Rock and the Pirates of Awesome storylines in the Kerpoof Store. For more information about subscriptions, visit http://www.kerpoof.com/membership.