As a supplement to the film, The American Super-8 Revolution, a basic guide is provided to help teachers function in a nondirective way to create a setting which will provide the media conscious with access to filmmaking. Described are ways to begin media projects, methods of organizing filmmaking activity in the classroom, and a topical list of things to know about super-8 filmmaking. A bibliography and list of recommended films is appended. (SK)
Those of us who have worked with filmmaking in the schools have learned that children who have been informed and entertained by television and film imagery since the crib are often more at home with the language of film than with the print medium. Frequently, they display an unusual interest in electronic media and its special language. It is normal for the children of a culture to take up the communication tools of that culture. As the adults of the culture and as the managers of the learning experiences of our children, we must see that our children take up the tools of electronic media and develop skills and critical capacities in their use both in and out of our schools.

This guide has been developed to supply teachers new to filmmaking with a basic background of information that is practical. The guide is offered as a supplement to THE AMERICAN SUPER-8 REVOLUTION, a film which documents one very typical teaching situation where a student surprises a teacher with no background in filmmaking by requesting to make a super-8 film as part of a social studies unit on the American Revolution. Many of the situations, conditions and creative problem-solving processes in the film are universal to any filmmaking in the classroom. But, while the film models a particular situation, it does not intend to offer a neat set of well-packaged lesson plans or "how-to" instructions to be followed meticulously. Rather, the intent is to be suggestive, heralding the presence of the electronic media child; encouraging the teacher to function in a non-directive way as a facilitator bringing together materials, the varied skills, personalities, and abilities of a classroom of students, and creating a setting which will provide the media-born an access to filmmaking. Thus, imaginations will be invited to expand and express themselves in new ways.

WAYS TO BEGIN

Contact your school district's media or AV coordinator and ask for a media consultant familiar with super-8 filmmaking to come to your class.

Ask your students how many of them have parents with super-8 home movie cameras; next ask them to ask their parents to come to class and explain how the movie camera works.

Contact high school student filmmakers and use them as resource people.

Find out if there are any local amateur or professional filmmakers and invite them to help.

Call your local camera store dealer to come teach some technical aspects of filmmaking and the camera.

Contact your curriculum development and/or department chairperson and discuss possibilities.

Check with your state arts council to learn if the state is participating in the Filmmaker-in-the-Schools Program, coordinated by The Center For Understanding Media in New York. If so, use that program as a resource.
Get your hands on any kind of super-8 camera and buy a roll of film. Now, either shoot a short little film or get your students to shoot what is known on the film frontier as a "one-reeler."

WAYS OF ORGANIZING FILMMAKING ACTIVITY IN THE CLASSROOM

On an Independent Study Basis: would be handled like any independent study activity, with weekly or daily meetings with the teacher to review and discuss problems.

On a Small Group Basis: facilitates filmmaking for a few within the ongoing classroom; requires formation of a production team with director, cameraperson, etc. which will meet with the teacher weekly to discuss progress.

On a Large Group Basis: requires the teacher to set up good organizational structure, obtain additional adult assistance for in-field production, establish the creative control of the director, and establish a division of labor through forming committees - storyboard, props and costumes, history and research, animation, maps, titles and artwork, technical difficulties, sound, narration, etc. (TIP-often the authority of the director must be reinforced during the course of the "class project" film.)

In all three of these, a production schedule must be arranged; rehearsals can be held during recess and free periods and after school; a method of giving students basic information on the operation of the camera, how to do a storyboard, and other technique and film language information must be devised.

Animation, it might be noted, is the most easily controlled and most easily administered kind of classroom filmmaking. It is easily contained in a corner of the classroom and is therefore the least distracting kind of filmmaking. Because everything must be pre-planned and prepared for a frame-by-frame assembling of the film in the camera, most of the work and time goes into pre-production, and because everything can be shot in sequence, the film is edited in the camera, resulting in the most efficient use of film and a one-to-one shooting ratio. Ideal for individual and small group activity. Drawback: the work is tedious for some students who would do excellent work in live-action.

Live-action is the opposite of animation. The camera is frequently turned out of the classroom and the process is much less self-contained. It affords the opportunity for more student involvement and allows for a greater variety of skills, talents, and abilities to come into play. Ideal for all three types of organization and is able to absorb large amounts of energy and process.

The Production Schedule: the time assigned for completion of the film and all its various stages of production.

Pre-Production: may involve committee formation, assignment of production roles (director, cameraperson, etc.), research, planning, scriptwriting and storyboarding, materials and prop-gathering, casting, and location selection.

Production: the shooting of the film, including retakes and shooting titles, maps or animation.

Post-Production: editing, recording sound to accompany film, completing the final cut.

A simple film which is shot in one day and edited in the camera and is returned from the lab in one week might take one to four days to bring the idea for the
for the film up to the point where shooting could be done. Thus, a simple production schedule would be: 1-4 days preparation, 1 day of production, 7 days of processing, and a total time of 9-12 days.

A more involved film could have several weeks of preparation, a week or several weekends of shooting, and several weeks of editing and finishing. Only through experiencing several student film productions does an understanding of the processes and ingredients of student filmmaking occur. The production schedule is ultimately determined by how much the teacher has learned about student filmmaking and how he/she decides to facilitate it. Generally, first films take twice as long.

It is important to remember that a student film's worth is not a matter of its degree of simplicity or complexity. A film usually reflects the filmmaker and the worth of the film to the filmmaker as process is oftentimes far greater than its worth as product. This is especially important in explaining the educational value of student filmmaking. And in connection with introducing student filmmaking to new audiences, it should be pointed out that a student often reveals abilities through filmmaking that weren't apparent before. Filmmaking is often a more exact measurement of ourselves than is provided in the classroom that relies on strictly verbal measurements. And since filmmaking calls upon different devices as means of measurement, you find students emerging and flowering who have given few signs of doing so before.

You will often find that the simple film evokes the most direct and appreciative response among audiences new to student films.

**A TOPICAL LIST OF BASIC THINGS TO KNOW ABOUT SUPER-8 FILMMAKING**

**The Camera:** the simple camera has a trigger, a lens, an eyepiece, a filter key and a footage counter. The zoom camera is shown and described below.

A. **The Trigger** - located on or near the handle; used for shooting "live-action."

B. **The Viewfinder and Eyepiece** - provide the view through the lens which "frames" the action. Eyepiece adjusts to each person's eyesight and should be set for the cameraperson shooting the film. A carefully focused shot can appear to be out of focus if the eyepiece is not set for the person viewing through the camera.

C. **The zoom Lens** - almost always the inner ring on the barrel of the camera. The zoom lens does several things: it enables you to focus the camera; it is used to compose the shot before shooting; and it can be used while the camera is running to move into (zoom in) or move away from (zoom back) on the action. If it is used in this way, it will go out of focus on the zoom-in unless the focus is pre-set before the filming begins. To pre-set the focus, zoom in on the subject all the way, focus using the focusing ring (D), then zoom back to where the composition of the scene appears exactly how you want it when the action begins. Now when you zoom in during the filming of the shot the subject will remain in focus. **MOST ZOOM-IN SHOTS GO OUT OF FOCUS BECAUSE THEY ARE NOT PRE-PLANNED.** Shots that do not anticipate possible zoom-ins almost always go out of focus.

D. **The Focusing Ring** - usually the outermost ring on the barrel of the camera; recognized by the infinity sign (∞) on the lens markings. Must be set to
read the distance of the subject from the camera, or the subject will not
be in focus. Turning the focusing ring after zooming in all the way en-
ables you to obtain sharp focus when looking through the viewfinder.

E. The Single-Frame Setting - usually a threaded hole on the camera body into
which the Cable Release is screwed. Sometimes it is a switch marked with a
dot or an "s".

F. The Cable Release - when pressed, this device advances one frame of film and
provides one exposure.

G. The Footage Counter - a dial that is activated when a film cartridge is in-
ertered into the camera which is designed to tell you how much film is shot.
It may read from 0 to 50, telling you how many feet of film has been shot,
or 50 to 0, telling you how many feet are remaining to be shot. Refer to the
camera manual to determine how the dial reads.

H. The Filter Key - all super-8 cameras have a device to filter sunlight so that
colors come out exposed correctly on the film. This filter sits in place
until you insert a filter-removing key or turn a switch on the camera that
removes the filter from the lens. The filter-removing key must be inserted
for all indoor shooting or the film will appear orange; the key must be re-
moved for all outdoor shooting or the film will appear blue.

A simple inexpensive Kodak Instamatic camera costs roughly $50 and is fine for beginning
live-action films. Cameras with zoom lenses and single frame (animation) capabilities
run roughly $200. NOTE: MOST SCHOOLS WHICH BUY SUPER-8 CAMERAS AND PROJECTORS ON BIDS
WITHOUT CONSIDERING THE TRACK RECORD OF THE EQUIPMENT IN THE SCHOOLS USUALLY END UP
GETTING LOW-BID EQUIPMENT THAT FAILS TO LAST. Either buy a simple movie camera like
the Instamatic without the zoom lens or animation features, or buy a solid 4-power zoom
camera with an electric light meter, single frame capacity, and a manual override for
the light meter. (Minolta, Bauer, and GAF cameras in the $150-$200 range have good track
records in my experience.)

The Tripod - insures steadiness when shooting and offers a good discipline that insures
a setting-up time for every shot; the most important part of animation, next to the
camera. (A heavy-duty tripod is needed for steadiness in animation.)

Movie Lights - the clamp-on reflectors installed with 250 watt or 500 watt bulbs (3200 K)
ar the most versatile. Don't rely on a single movie light mounted on the camera
for creative filmmaking. Using movie lights indoors slows down the process of film-
making, but they prevent bad exposure and disappointment. As a rule, you can never
have too much light when shooting indoors.

Projectors - are useless if they are poorly made and, after a short life in the schools,
begins chewing up film. I have found the Kodak M-95 to be the most durable for a
price in the range of $150.

Editor/Viewers - are essential for any editing work. I have found the Argus editors
durable for a price of roughly $40.

Splicers - the tape splicers that seem most durable and easiest to work are the Kodak
Universal Splicer and the Guillotine. Both are under $20. Beware the cheap metal
splicers.
Film Stocks - basically there are two types of film, one for low-light and indoor shooting; the other for sunlight and animation indoor shooting. Ektachrome 160 should only be used indoors or under the shadows of trees in the woods, at nightfall, etc. Ektachrome 40 should be used outdoors, unless you are shooting under low-light conditions, and it is ideal for animation.

The movie camera provides us with "moving" pictures.

- Super-8 film runs through the camera at the standard speed of 18 frames per second which is used for normal motion in live-action filming.
- A film shot at 12 frames per second and projected at the standard speed of 18 frames per second creates fast motion, like the Keystone Cops.
- A film shot at 32 or more frames per second and projected at 18 frames per second creates slow motion.

The Frame - the basic element in film is the frame. Each frame is located between two sprocket holes and contains one image exposed by the camera. All visual information is contained in the frame. The camera is motorized so that when running at normal speed, 18 frames pass by the lens opening in one second, with each frame capturing a portion of the action that occurs in front of the camera. When these frames are projected on the screen at normal speed the succession of frames creates the illusion of motion or "moving" pictures.

Frame Composition - it is the filmmaker's job to control the information in the frame. This is accomplished by composing each shot so that the information the filmmaker wants to communicate gets clearly and effectively communicated. Although "speaking clearly" in filmmaking is analogous to speaking clearly in conversation, it is a visual process and does not offer the opportunity to reiterate or go back over what is said. Once the choices are made and the frames contain their information that information has to stand. The frame and what it contains and how it contains it are at the heart of the filmmaker's craft, whether he/she is a professional or a young student. Fortunately, the filmmaker has a variety of different camera shots and camera angles at his/her disposal in dealing with frame composition.

The Shot - the action that is contained on a single run of the camera.

Types of Shots:

Long shot: provides a spacious view of the subject with the subject a great distance from the camera. Helps establish the location and the subject's relationship with the environment or surroundings.

Medium shot: provides a general view of the subject at medium range.

Close-up: provides a detailed view of the subject and is used for emphasis or to reinforce an action, expression or an observation of which you want the audience to take special note.
Wide-angle shot: provides a close proximity to the subject, but a wide angle of view; exaggerates movement toward the camera.

Telephoto shot: provides a close visual proximity to the subject while the distance from the subject is felt; compresses or retards movement towards the camera.

Pan: a slow horizontal movement of the camera to provide a panoramic view; often pans are too fast and disturbing.

Zoom: using the system of variable lenses to "zoom in" to or "zoom back" from a subject; often misused; a zoom should have a surprise or special piece of information waiting at the end.

Tilt: a slow movement of the camera up or down.

The Sequence - a series of shots strung together to form a continuity is a sequence.

The Scene - a location in which one or more sequences take place.

Storyboarding - a method of clarifying each shot in a film by simple, cartoon-like drawings placed in a series of boxes along with a brief description of the action and notations for the length of the shot as well as instructions for the camera. The storyboard should reflect a variety of long, medium and close-up shots as well as pans, zooms, and effects.

Example:

Storyboarding is done to provide a clear visual translation of the director's ideas into concrete instructions for all of the production team and especially the actors and actresses. The storyboard is immensely useful in the field to keep account of what shots and what sequences remain to be filmed. It is a guide and the filmmaker can vary from it when good shots that weren't anticipated develop, as long as the shots work with the other shots in the storyboard. Storyboards, by establishing shots, screen direction, etc., help insure efficient shooting ratios by cutting down on excessive shooting.

Animation: Frame-By-Frame Filmmaking - anytime the camera exposes a single frame with each pull of the trigger, letting the filmmaker control each frame independently, the camera is animating. Frame-by-frame filmmaking offers the greatest control over the subject matter and, since the film is assembled and edited in the camera, shooting ratios are usually one-to-one. Animation is used most optimally when a story or idea seeks the absolute freedom of the imagination so that anything and everything can be made to happen. The magic in animation hinges on the saying that "in animation, anything can come true."

Movement in animation is created under the camera on the animation stand using either prepared artwork that has the movement and action drawn on different sheets or "cells," which are then photographed two, three or four or more frames at a time, or by physically moving objects or cut-outs under the camera, clicking a few frames for each move.

Types of Animation

Doodle Films: using clear film that you can see through and drawing with permanent markers in each frame creates what is called a "doodle film."
Scratch Films: using black, unexposed film and scratching images in each frame, then coloring them with permanent markers creates a "scratch film."

Both of these films should be accompanied by music when projected. These films teach a sense of the duration of images on the screen in relationship to how many frames they occupy.

Cut-Out Animation: using painted backgrounds and cut-out characters, this is one of the most popular kinds of animation. Movement is achieved by clicking several frames (3 or 4 frames per 1/4" move produces good animation) and moving the cut-outs a little at a time. (Example: LITTLE GIRL AND THE GUNNY WOLF, ACI Films)

Clay Animation: place modeling clay or plasticene onto a "set" which may be painted or just simply a table top. Add some props, and shape the clay a little at a time, followed by three or four clicks of the camera. By recording each change and movement of the clay and the props, the clay is animated into highly entertaining action on film. (Examples: PLASTIPHOBIA, International Film Foundation; CLAY: ORIGIN OF THE SPECIES, Contemporary Films)

Still-Picture Animation: libraries are great resources for this kind of film, for any number of themes can be chosen from the thousands of pictures in the books of a library. The pace of the film may be very fast, giving only three frames of exposure to most pictures. (Example: AMERICAN TIME CAPSULE; CONDENSED CREAM OF BEATLES, Pyramid Films)

Pixillation: the animation of real-life objects in a three-dimensional or real-world landscape. A chair can be made to miraculously move across the floor by moving the chair one foot at a time and clicking for each such move. This is one of the most popular forms of filmmaking among kids. (Example: BLAZE GLORY, Pyramid Films)

The Set-up for Shooting Artwork, Pictures, Maps and All Animation:

Place the camera on a tripod and raise it to a distance of four feet off the floor. Aim the camera straight down. Place two clamp-on lights to the right and left of the tripod and aim them to the floor under the camera. Turn them on. Place a piece of 8-1/2 x 11 paper with a dot in the center under the camera. Set the lens at wide-angle so you can see all four edges of the paper through the viewfinder. Center the paper in the viewfinder and make the four sides of the paper align with the four sides of the viewfinder. Zoom into the dot all the way. Focus on the dot. Zoom back to a wide angle. Tape the 8-1/2 x 11 paper down to the floor. Now place any artwork under the camera keeping the center of the artwork at the center of the paper. Zoom into the artwork until you can't see the edges. Now you are ready to shoot.

Shooting Ratio - the amount of film shot versus the amount of film used in the final cut of the film. When shooting live-action, it is not uncommon to have two to three times as much film shot as is used once the film is edited to an effective length. With good planning, most kids shoot live-action films with a 2:1 ratio. Animation films are completely pre-planned and controlled so that the shooting ratio is 1:1.

Rushes - newly processed film being screened for the first time. When rushes are viewed, someone should be charged with the responsibility of writing down the contents of each reel viewed and transcribing that information onto the box containing each reel. Others who may have footage on a particular reel can then look on the boxes to locate the reels containing their footage.
If a student splices out his/her footage from a "rush" reel, his/her name should be scratched off the box and the remainder of the reel returned intact to the box.

Sound Recording - by projecting the finished film and recording sound while viewing it, segments can be taped that coincide with the running time of the film. These segments can then be assembled in sequence and run with the film when it is shown. The recorder, whether it is 1/4" or cassette, should be placed as far away from the projector as possible, so that projector noise won't be noticeable in the recording. Projecting from another room onto the wall of the recording room is a good way to record the sound. The recording should be made with care to pick a quiet location and choose people to speak into the microphone who speak clearly and distinctly.

Projecting Super-8 Film - to project super-8 film in a classroom, the room must be very dark. The worst enemy of super-8 film is the venetian blind. Next are the translucent shades. Most classrooms cannot be fully darkened. In this case, get a large cardboard box, paint the inside black and attach white poster board to the inside bottom. Project your films into the box, with the back of the box facing the windows. To show your film around the school, take time to darken the room or carry the box theatre with you.

Editing - the process of eliminating all but the very best and most effective shots and assembling these together to make a film that does what the director wanted it to do. A space that can be darkened should be set aside for editing, where a person can work without being disturbed. The surface should be clean and free of dust. A device for hanging shots from the film should be placed on the wall behind each editing station. (Clothespins nailed to a 2 x 4 are effective). A movie editor/viewer, splicer and some 1/4" masking tape and scissors are the equipment needed for editing.

The Rough Cut - the first order of business is eliminating bad takes and out-of-focus shots. After splicing these out and joining the remaining film with masking tape for viewing in the editor, a shot list should be made listing the order of shots as they exist on the reel. Then place the shots in proper sequence or in the order on the storyboard.

The Fine Cut - the fine cut is completed when shots that are too long have been trimmed, pauses before action begins have been trimmed, the pace of the film has been edited effectively, and titles have been spliced into place.

Filmmaking Integrated Into Various Subject Areas - the transfer of an idea into clear and meaningful communication is what most of filmmaking is all about, and is the root of all communication skills development. It is therefore a natural for use in the Language Arts / English Curriculum. It would be a tragedy, however, to limit its special way of involving and motivating students in the discovery and learning process from use in a variety of subject areas - from the cut-out animation of the photosynthesis process in biology and the translation of a student's short story into film to the filming of local history for the Bicentennial.

Filmmaking As A Separate Course - teaching a class of 20 students (too often filmmaking classes are popularized and become over-populated with over 25 students) should be supported by a minimum of one 4-power zoom camera that takes single frame animation, a simple camera for filming live action, two editors, a tape splicer, and a projector. Tape recorders are usually available in the schools. A lab fee of $5.00 per student should be assessed to match the $100 for film and processing that the school, PTA, or drink-machine money would put up for the course. This would permit each student two rolls of film. Students could join together to form production teams and pool their film to make a long film. (TIP - try to keep student films
under ten minutes long; short films go further in many ways.)

Establishing A Resource Center For Filmmaking - forming a student filmmaking resource center enables schools to purchase a pool of good quality durable equipment and prepare a suitable environment where editing, sound recording, titling, animation and film screenings can take place. It sounds elaborate, but can be worked into a library, a storage space, and sometimes even the back of an auditorium stage. Teachers and students could borrow equipment out of the center. Costs can then be justified just as time-sharing justifies costs of computer centers.

Attracting Community/Parent Support - hold a mini-festival after several student films are made. Supplement those films with some commercially distributed 16mm short films that display a variety of different types of filmmaking ("Blaze Glory," etc.) This should provide visibility and support around fledgling student filmmaking efforts, if the community and parents can be aroused to attend.

Additional Resource Listings:

"Celluloid Curriculum". Maynard. Hayden Book Co., N.Y. ($7.95)

Books:

"Doing The Media." Center For Understanding Media, 75 Horatio St., N.Y., N.Y. ($5.00)
"Children Are Centers For Understanding Media." Center For Understanding Media (See Above)
"Exploring The Film." Kuhns. Pflaum/Standard, Dayton, Ohio
"Films Deliver: Teaching Creatively With Film." Schillaci. Citation Press, N.Y., N.Y. ($5.25)
"Film: The Creative Eye." Sohn. Pflaum/Standard, Dayton, Ohio
"Films Kids Like." ALA/Center For Understanding Media. American Library Ass'n., Chicago ($4.95)
"Filmmaking In Schools." Lowndes. Watson/Gutpill Pub., N.Y. ($8.95)
"Children As Filmmakers." Lidstone & McIntosh. Van Nostrand/Rhinehold Co., N.Y. ($7.95)
"Make Your Own Animated Movies." Anderson. Van Nostrand/Rheinhold, N.Y. ($5.95)
"Movies: The Universal Language." Sullivan. Fides Press, South Bend, Ind. ($1.35)

Periodicals:


16mm Films:

Blaze Glory - pixillation - Pyramid Films, Santa Monica, Ca.
Basic Film Terms: A Visual Dictionary - general - Santa Monica, Ca.
Building A House - live action documentary - I.F.F., N.Y.
Clay: Origin of the Species - clay animation - Contemporary Films
Plastiphobia - clay animation - I.F.F., N.Y.
Frame-By-Frame - general animation - Pyramid Films
How To Animate A Gingerbread Boy - general animation - Churchill Films
Little Girl and the Gunny Wolf - cut-out animation - ACI Films, Inc., N.Y.
Occurrence At Owlcreek Bridge - live action story - Contemporary Films
American Time Capsule - kinestasis animation - Pyramid Films
Understanding Movies - general - Coronet Films, Chicago

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