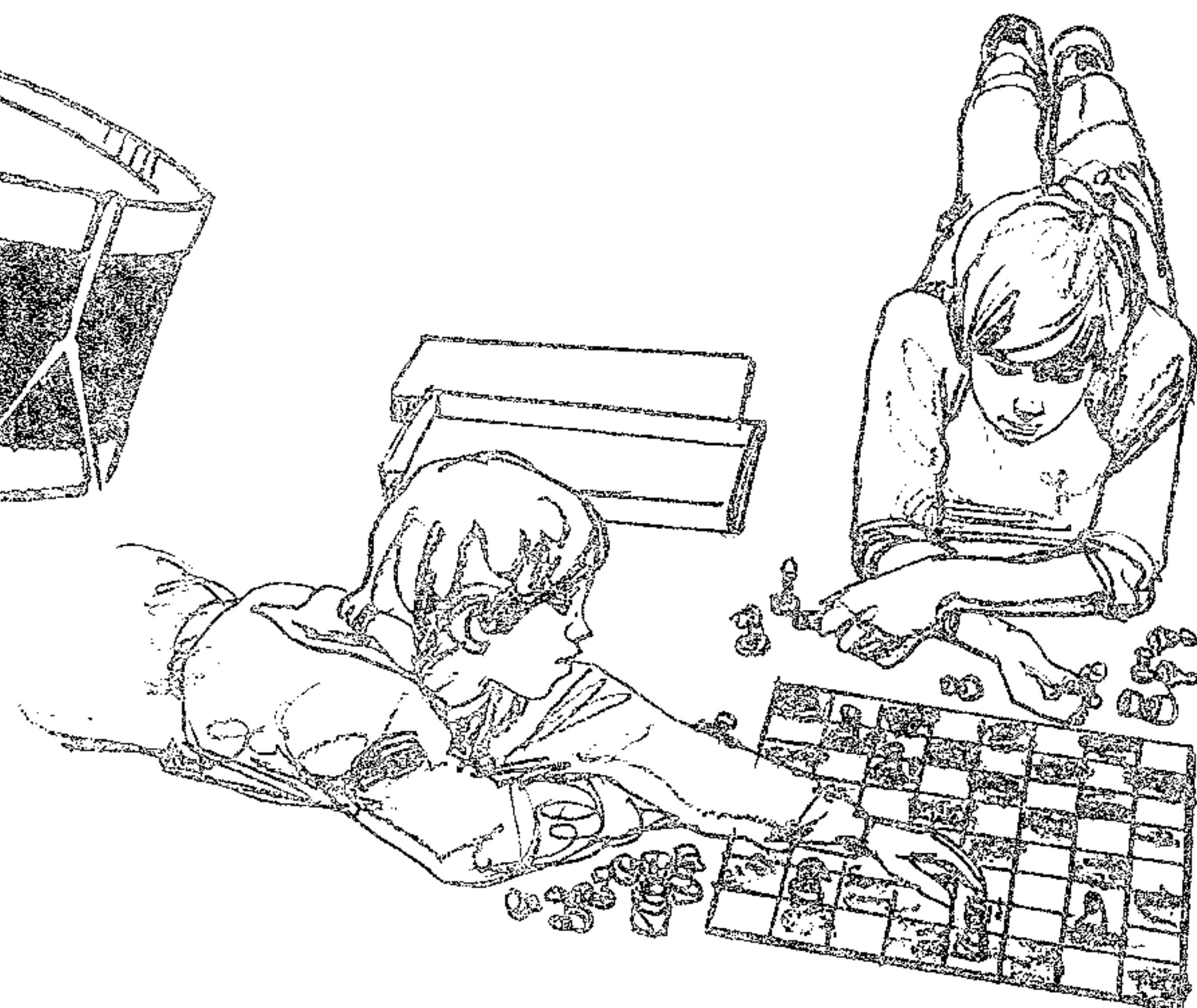
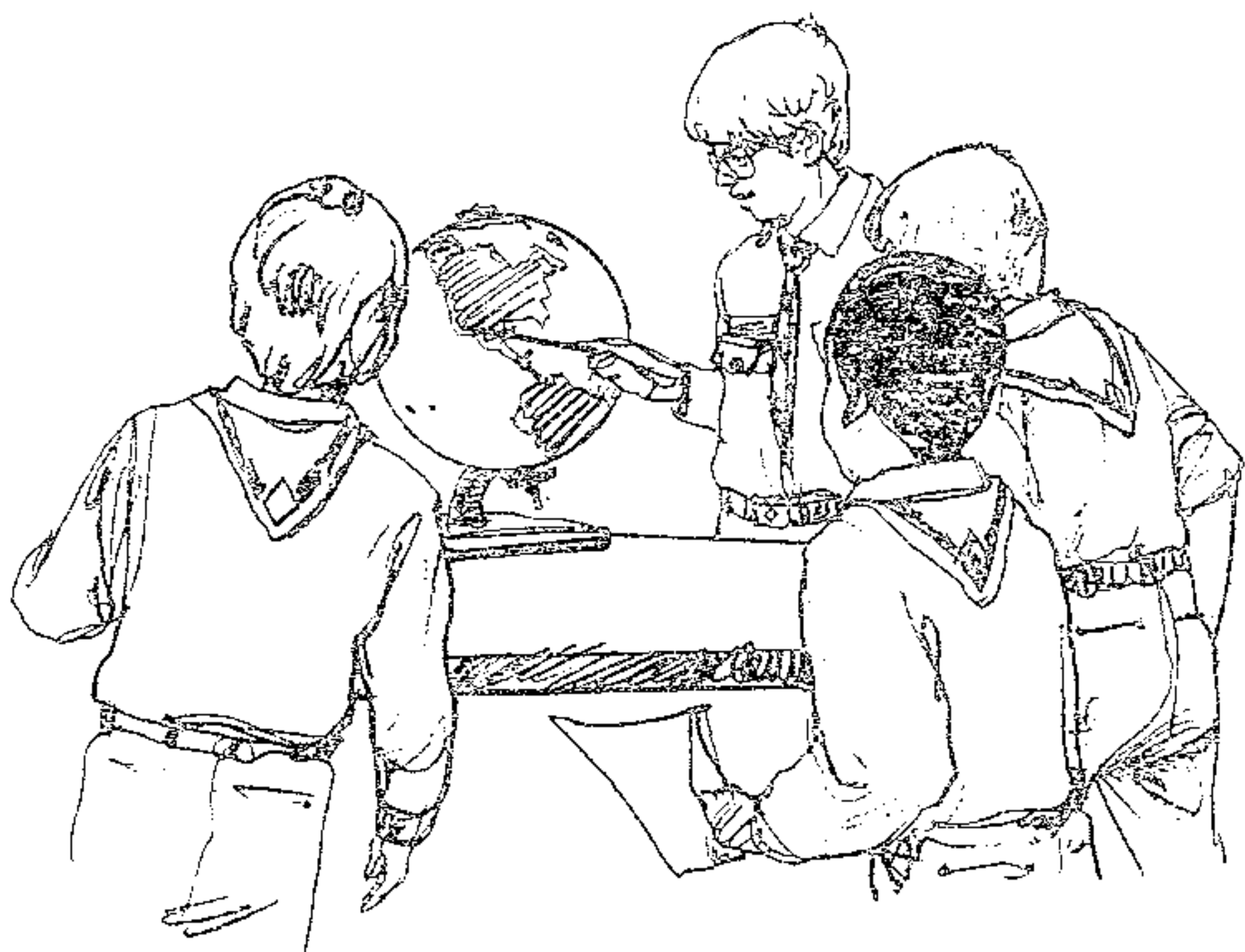
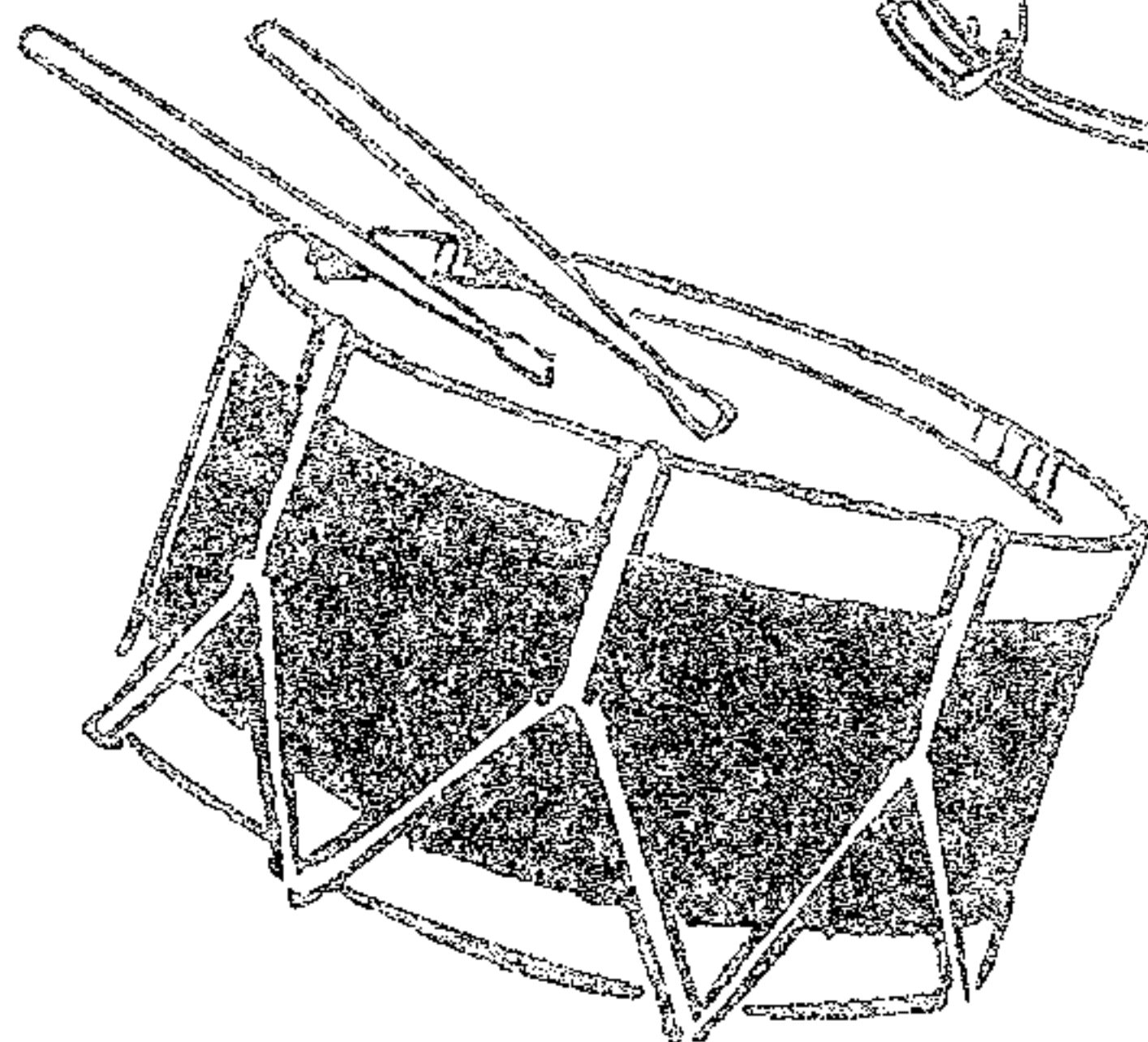
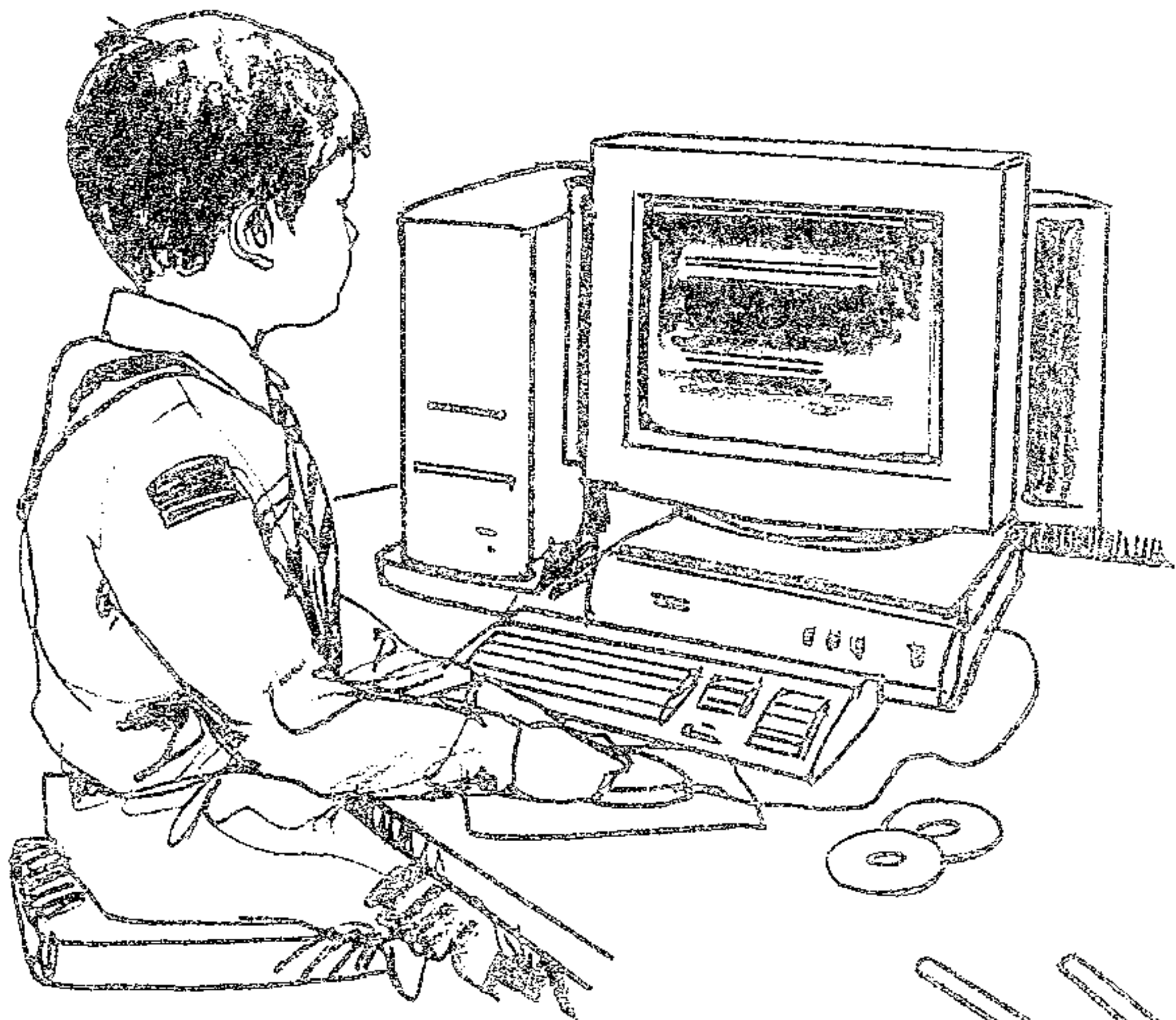


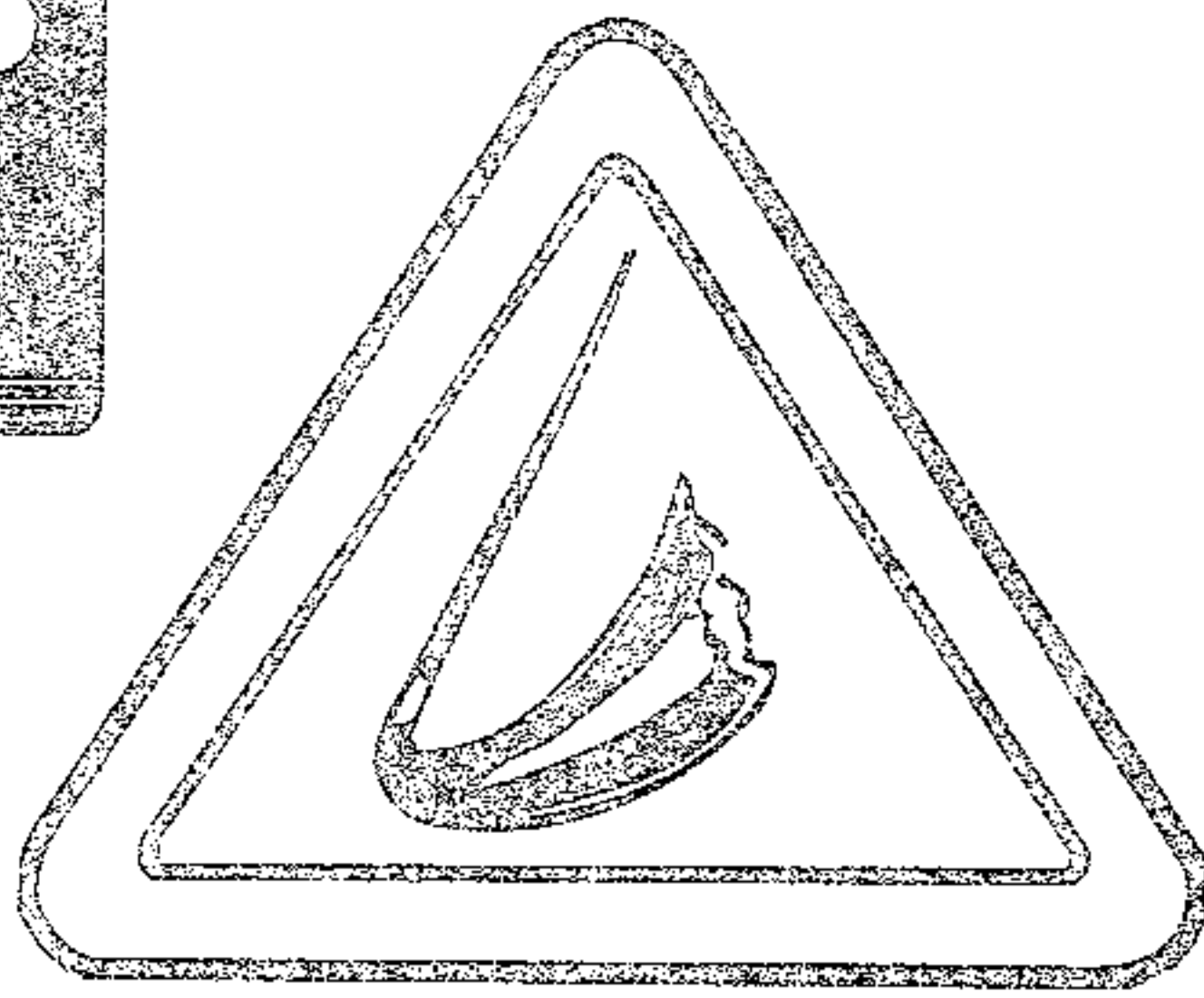
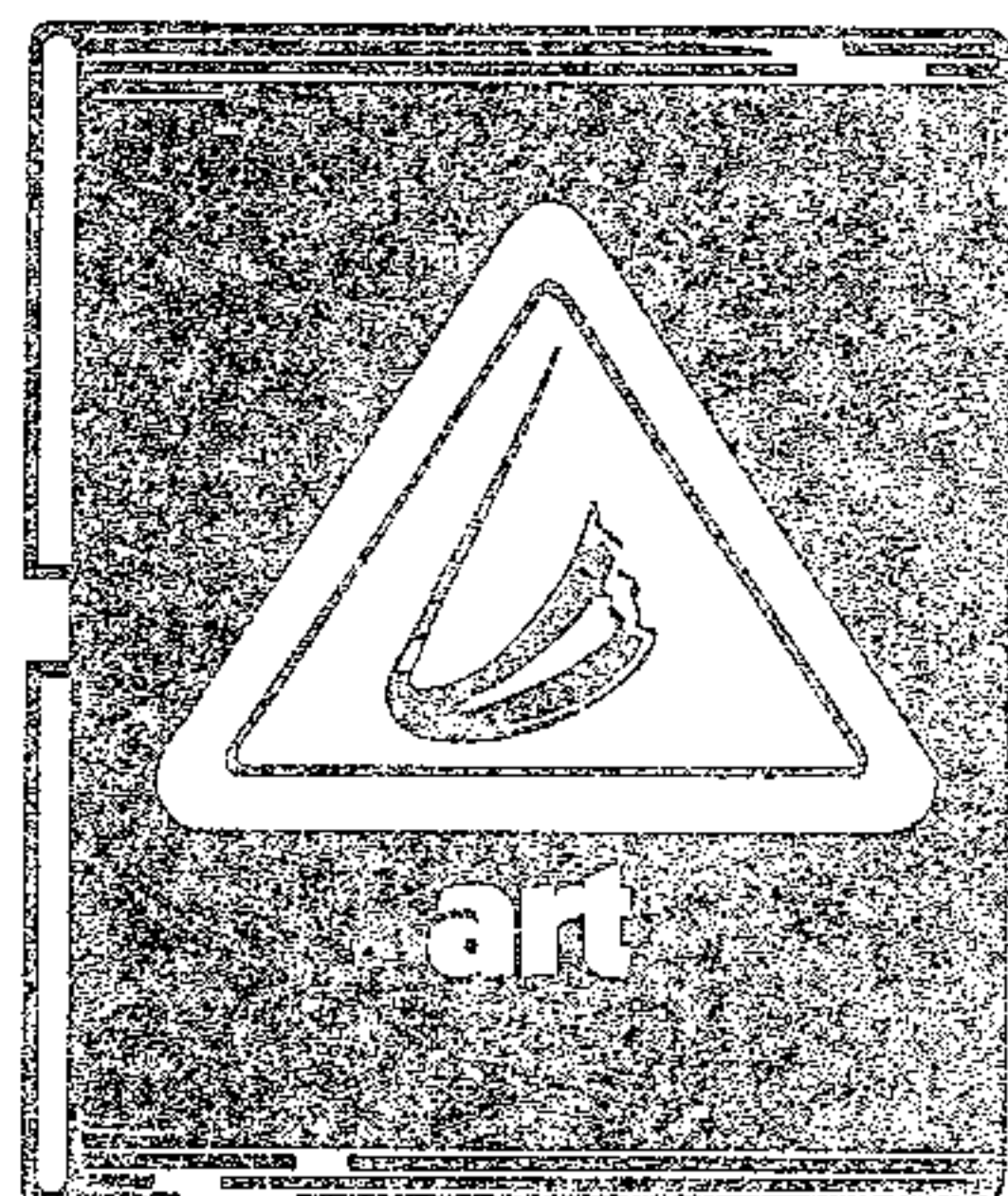
Following are the requirements for earning the Academics belts loops and pins.

Remember:

- Belt loops and pins are earned only by Tiger Cubs, Cub Scouts, and Webelos Scouts (not adults).
- Requirements may be adjusted to accommodate the special needs of boys with disabilities.
- Webelos Scouts may earn a belt loop or pin a second time to qualify for Webelos activity badges.
- Boys may earn belt loops more than once; however, leaders should encourage boys to try different requirements and earn the pin. Packs should have a clear policy in place about whether the pack or the boy's family is responsible for the cost of awards earned more than once.



Cub Scout Academics: Art



Tiger Cubs, Cub Scouts, and Webelos Scouts may complete requirements in a family, den, pack, school, or community environment. Tiger Cubs must work with their parents or adult partners. Parents and partners do not earn loops or pins.

Belt Loop

Complete these three requirements:

- _____ 1. Make a list of common materials used to create visual art compositions.
- _____ 2. Demonstrate how six of the following elements of design are used in a drawing: lines, circles, dots, shapes, colors, patterns, textures, space, balance, or perspective.
- _____ 3. Identify the three primary colors and the three secondary colors that can be made by mixing them. Show how this is done using paints or markers. Use the primary and secondary colors to create a painting.

Academics Pin

Earn the Art belt loop, and complete six of the following requirements:

- _____ 1. Visit an art museum, gallery, or exhibit. Discuss with an adult the art you saw.
- _____ 2. Create two self-portraits using two different art techniques, such as drawing, painting, print-making, sculpture, or computer illustration.

- _____ 3. Demonstrate how to make paper. Make a sample at least 4 inches by 4 inches.
- _____ 4. Make a simple silkscreen or stencil. Print a card or T-shirt.
- _____ 5. Create a freestanding sculpture or mobile using wood, metal, soap, papier-mâché, or found objects.
- _____ 6. Create an object using clay that can be fired, baked in the oven, or hardened in water.
- _____ 7. Photograph four subjects in one theme, such as landscapes, people, animals, sports, or buildings.
- _____ 8. Make a collage using several different materials.
- _____ 9. Use your artistic skills to create a postage stamp, book cover, or music CD cover.
- _____ 10. Use a computer illustration or painting program to create a work of art.
- _____ 11. Display your artwork in a pack, school, or community art show.

Resources

Your local library, schools, museums, and art galleries are all excellent sources of information about art. Also visit art supply stores and teacher supply stores for more information and art materials. See original works of art at museums, art galleries, exhibits, and artists' studios.

Invite an artist to do a demonstration at a den meeting. Books, videos, and television can provide information about artists and their lives. Watch for children's art classes offered by after-school programs and local parks and recreation departments.

Tips for Parents

- Establish a supportive and nurturing atmosphere where your child can learn to express himself through his art. Praise his work.
- Set aside a place where your child can practice his skills and work on projects without interruptions from siblings or pets.
- Help your child learn to see color and design in everyday objects, in nature, and in the artwork of others.
- Teach to your child how to use art materials. Let him experiment with the materials before he tries to create a finished product.
- Explain to your child the value of planning ahead. Gathering materials, setting up a work area, and possibly sketching out some preliminary ideas can help a child learn to focus on what he would like to accomplish.
- Encourage your child when he becomes frustrated. Explain that he will not like everything he creates. Give him the option to take a break and finish later. Assure him that through trial and error, he will learn to express his ideas through art.
- Read labels on all art materials. Avoid materials that are toxic, produce permanent stains, or might cause allergies.

When visiting a museum or exhibit, let the child set the pace—museums can be tiring. Make the experience fun for both of you. Ask questions that spark the child's interest and help teach him how to view art.

- What did you notice first about the art piece (subject, colors, shapes, etc.)?
- What general style is the art?
- How does the work "speak" without using words?
- What do you think the artist wants the audience to see or feel?
- What part of the work gives you special feelings? What kind of feelings?

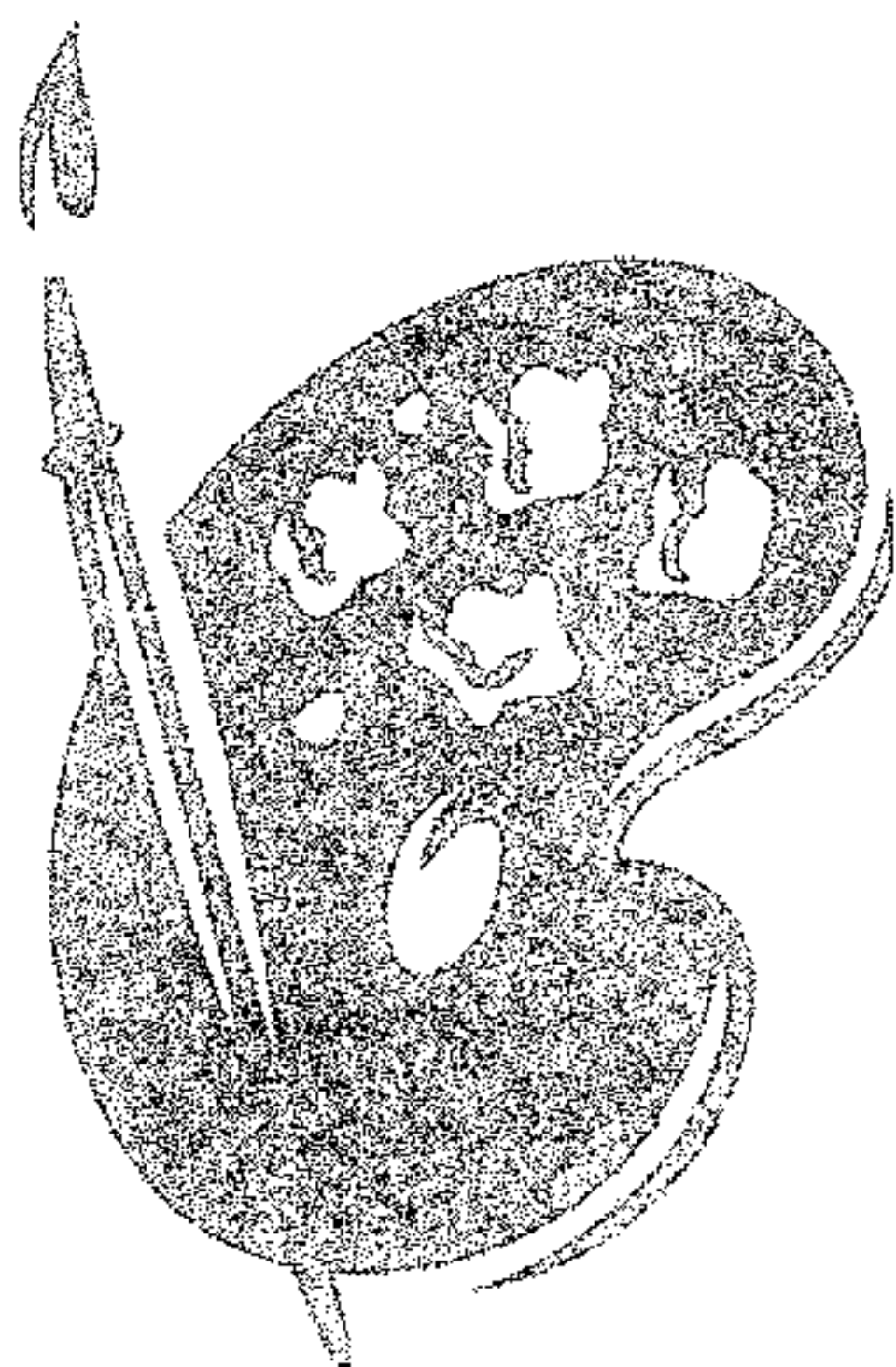
Styles of Art

Observations of the Real World. The artist imitates life by using details, lighting, and carefully planned designs that show recognizable subjects.

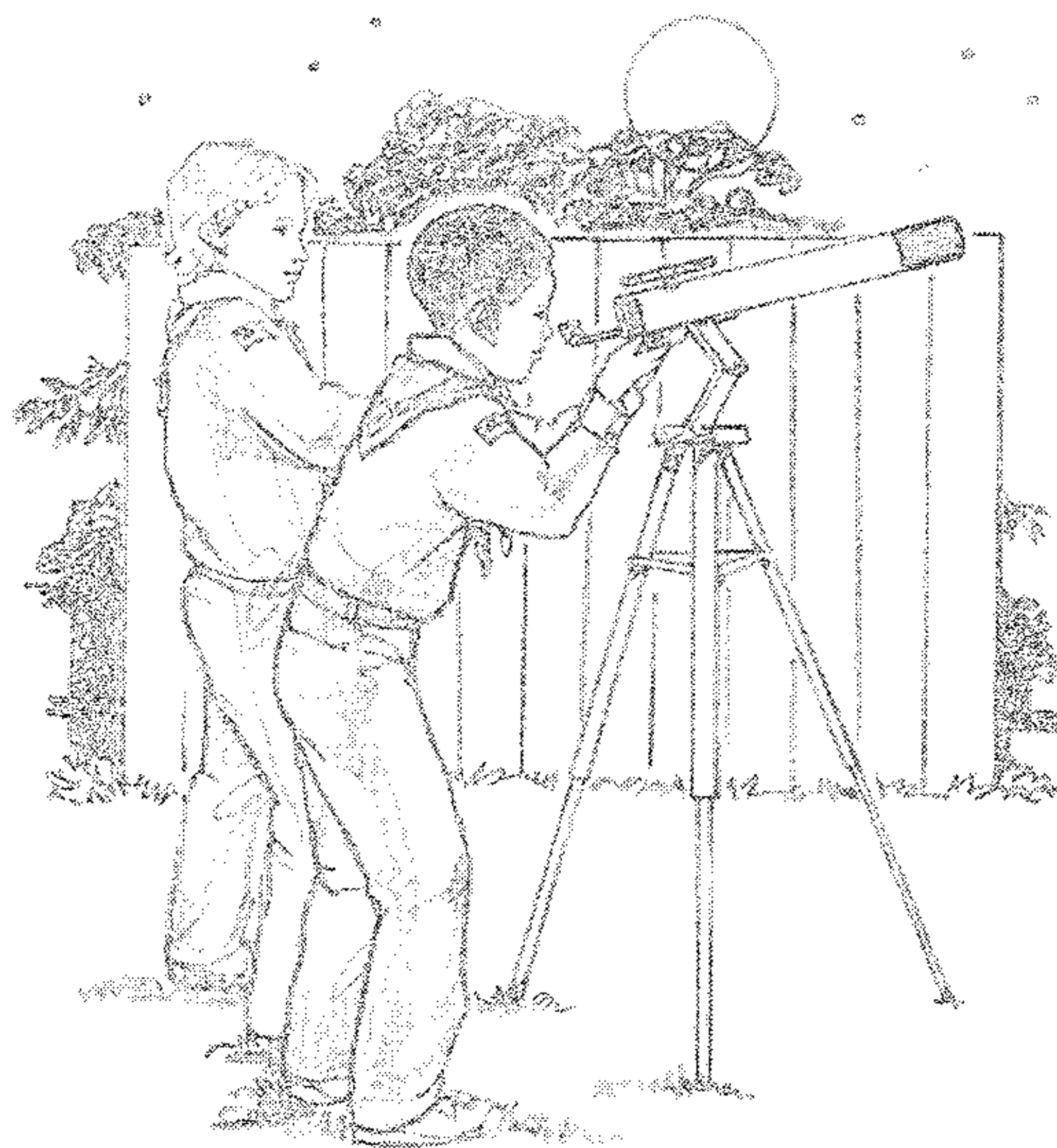
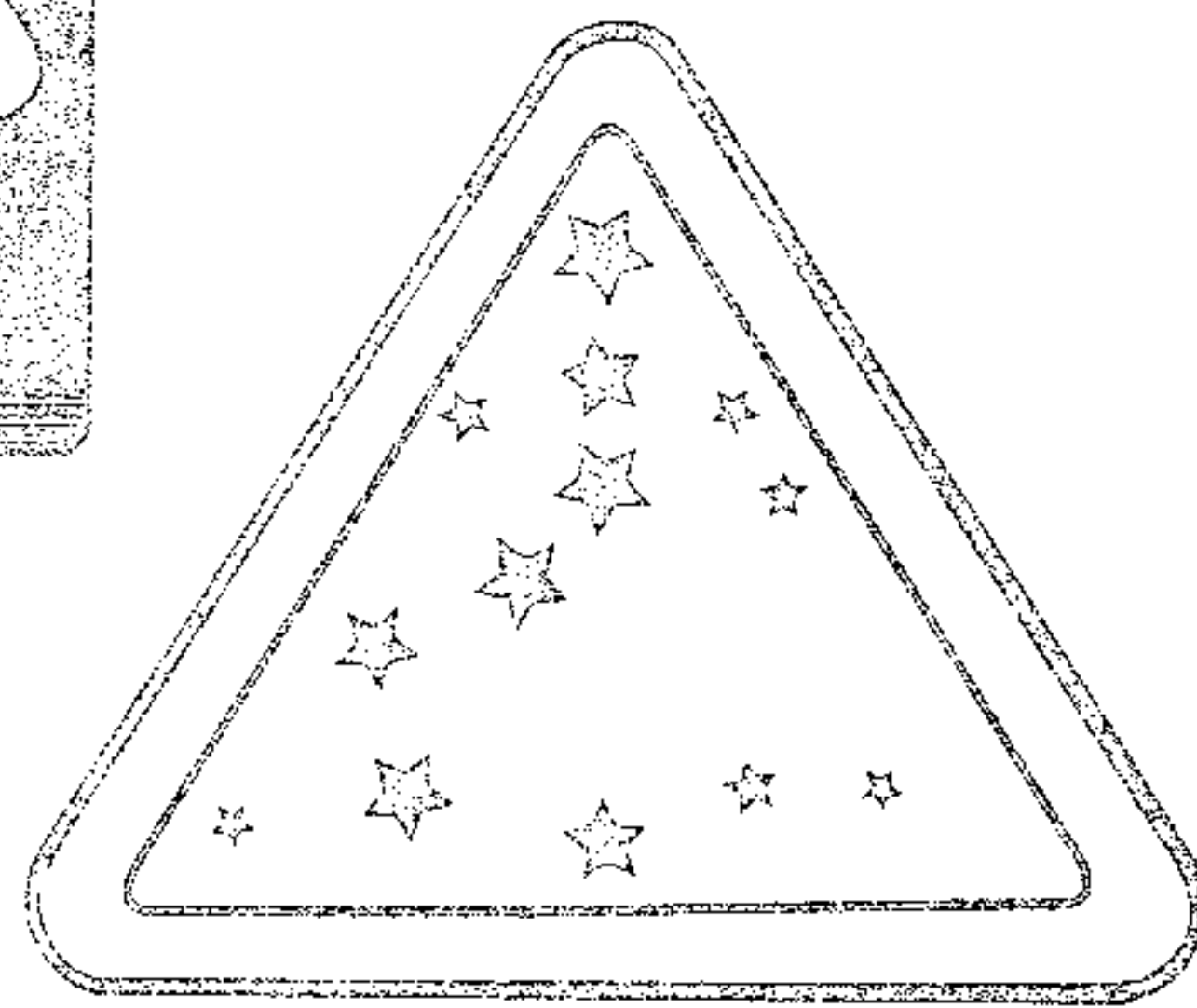
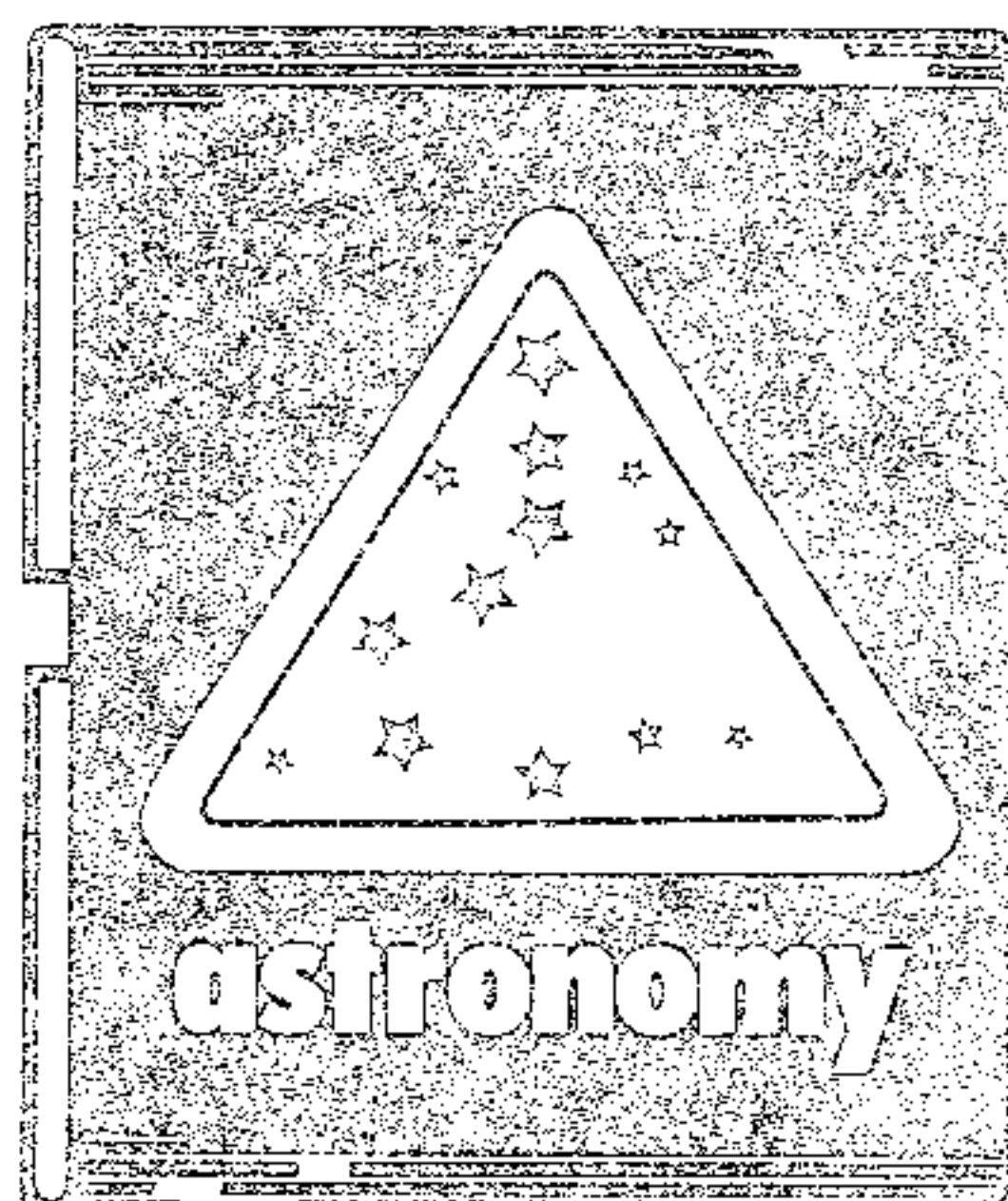
Creation of Imaginary Worlds. The artist imaginatively combines familiar subjects or scenes in a way that may remind us of the strange combinations of images in dreams.

Expression of Feelings. The artist tries to capture a mood or feeling, rather than show how something looks. He or she may exaggerate, omit details, or intensify colors, shapes, or lines to help us identify the feelings.

Invention of Visual Order. The artist creates an arrangement of lines, shapes, and colors that are meant to intrigue our eye and fascinate us.



Cub Scout Academics: Astronomy



Tiger Cubs, Cub Scouts, and Webelos Scouts may complete requirements in a family, den, pack, school, or community environment. Tiger Cubs must work with their parents or adult partners. Parents and partners do not earn loops or pins.

Belt Loop

Complete these three requirements:

- _____ 1. Demonstrate how to focus a simple telescope or binoculars. (A local astronomy club may be a resource for this activity.)
- _____ 2. Draw a diagram of our solar system—identify the planets and other objects.
- _____ 3. Explain the following terms: planet, star, solar system, galaxy, the Milky Way, black hole, red giant, white dwarf, comet, meteor, moon, asteroid, star map and universe.

Academics Pin

Earn the Astronomy belt loop, and complete five of the following requirements:

- _____ 1. Draw a diagram of a telescope and explain how it works.
- _____ 2. Explain how to use a star map.
- _____ 3. Draw and label five constellations. See if you can locate any of them in the sky using a star map.
- _____ 4. Find the North Star. Explain its importance.

- _____ 5. Interview an astronomer. This person may be a professional or an amateur astronomer from a local astronomy club. Explain what you learned to your den or family.
- _____ 6. Learn about careers that relate to astronomy. Make a list of those careers. Tell your den or an adult family member what school subjects will help you get a job in those careers.
- _____ 7. Visit a planetarium or a local astronomy club. Give a report on what you learned to your den.
- _____ 8. Make a poster illustrating the different kinds of stars. Include a diagram showing the life cycle of a star.
- _____ 9. Learn about some of the early space missions. Tell your den or family about one of them.
- _____ 10. Find a news story about a recent happening related to space. Tell your den or family about this event.
- _____ 11. Write a report on two famous astronomers.
- _____ 12. Locate three major observatories on a map. Explain why these locations are good for astronomy.

Resources

Check the children's section at your local library for information on astronomy. If you have access to the Internet, try using various search engines to look for the information you need.

A field trip to an observatory, planetarium, museum, or local astronomy club may provide an excellent experience in astronomy.

Be sure to check out the Space Place; it has lots of fun, astronomy-related activities:

<http://spaceplace.jpl.nasa.gov>

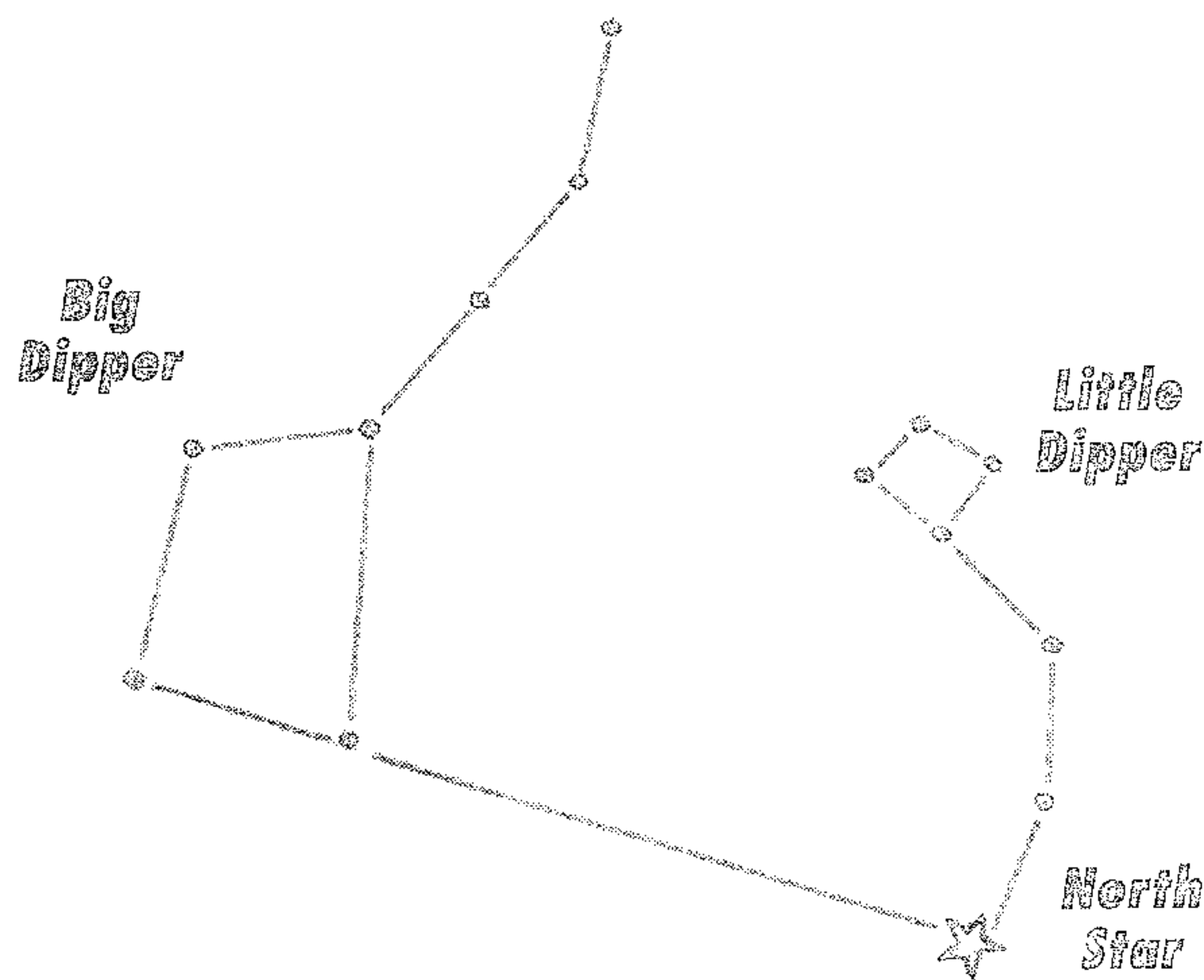
And don't miss these good astronomy sites, either!

<http://astroleague.org>

<http://skyandtelescope.com>

<http://stardate.org>

Finding the North Star



Finding the North Star is relatively easy once you find the Big Dipper—one of the easiest constellations to locate. Once you find the North Star you can find the Little Dipper. They won't always be at the same angle, though—in the course of a year, they will both rotate completely around the North Star.

Famous Astronauts

Sally Ride

John Glenn

Yuri Gagarin

Buzz Aldrin

Ellison Onizuka

Neil Armstrong

Alan Shepherd

Constellations

Aries—The Ram

Cancer—The Crab

Crux—Southern Cross

Draco—The Dragon

Gemini—The Twins

Libra—The Scales

Orion—the Hunter

Pegasus—The Winged Horse

Pisces—The Fish

Sagittarius—The Archer

Scorpius—The Scorpion

Taurus—The Bull

Ursa Major—The Great Bear

Ursa Minor—The Lesser Bear

Famous Spacecraft

Sputnik

Telstar

Apollo 11

Apollo 13

International Space Station

Friendship 7

Lunar Lander

Challenger

Space Shuttle

Locate the North Star (Polaris) in the night sky. The North Star is the last star in the handle of the Little Dipper constellation. If you have trouble finding it, find the Big Dipper. The two lowest stars in the Big Dipper (the outermost stars of the cup of the dipper) form a straight line that “points” to the North Star (if you imagine the distance between the two lowest stars as being x , the north star will be a distance of $4x$ away in the direction that the two lowest stars point). You may also find the constellation Cassiopeia, which is always opposite the Big Dipper. The North Star is located about midway between the central star of Cassiopeia and the Big Dipper (see figure).

Draw an imaginary line straight down from the North Star to the ground. This direction is true north, and if you can find a landmark in the distance at this point, you can use it to guide yourself.

