

The Lost Stars Lesson Plan for KS1

<p>Warm - Up Ask the class for ways that we use stars (Or where we see stars being used)</p> <p>Use photo prompts of the following to help the discussion. Ask “How would this person use the stars?”: A sailor/pirate - Uses stars as a compass. A fortune teller - Uses stars for astrology (star signs.) A teacher - Gives out gold stars as a reward system. Pinochio - Makes wishes on them.</p>	<p>Objectives: Children see that at night time not all lights are necessary, and that too many bright lights make it harder to see stars. (Optional: The dark yellow sky at night is called ‘Skyglow’)</p>	<p>Experiment with art techniques: Using a brush, flick white poster paint onto black paper.</p> <p>Use star-shaped cookie cutters on play dough.</p> <p>Use star-shaped sequins to create a collage of the night sky on black card.</p> <p>Use a star-shaped hole punch on strips of black card to make bookmarks</p>
<p>Introduction (10 minutes) Read <i>The Lost Stars</i>, then discuss the book:</p> <p>Why did the stars take a break? Prompt: Did they feel like people cared about them?</p> <p>When did the people notice that the stars had left? Prompt: Did they notice straight away, or did something happen to make them realise?</p> <p>Hold open the final pages of the book (the spread featuring a family looking up at the sky.) What has changed since the start of the book? If necessary, turn back to the spread of the town at the start of the book. Draw attention to the ‘Skyglow’ (the yellow glow), the bright signs, the light on the helicopter and the lights that are on in all of the buildings.</p> <p>Do you think that all of these lights in the buildings need to be on?</p> <p>Is it fair that we ignore the stars, when they work so hard to make the sky look beautiful?</p>		<p>How to use the pen control sheet (5 minutes): Photocopy the sheet so that you have enough for each of your pupils. Offer them pens of varying thickness and encourage them to follow the dashed lines as closely as possible to draw the stars from the book.</p>
<p>Aims of the introduction Pupils will: Recognize that we need to appreciate stars more. Identify the causes of skyglow (even if they haven’t grasped the definition.) Be introduced to the idea that turning off those light sources will make it easier to see the stars.</p>	<p>Key words: Night Stars Lights Skyglow.</p>	<p>Display ideas: Cut star shapes out of white paper. Ask the children to write wishes on them. Staple the letters to the stars to the wall, include some stars who look like they are reading the letters and smiling.</p>
<p>Optional activity - Letter to the stars (Literacy - 15 minutes) Either as a group or working individually, finish this letter template.</p> <p>“Dear Stars</p> <p>Thank you for...</p> <p>Please come back soon - we promise that we will...”</p>	<p>Teaching Assistant group Role Play (Drama - 10 minutes) 1. Cast pupils in the roles of stars and the heroes who convince them to come back. 2. Decide on three reasons to convince the stars to come back. 3. Include the promise “We won’t forget you again!” 4. Act out the play for the rest of the class.</p>	<p>Final exercise - Discussion (10 minutes) Ask the class to sit in a circle.</p> <p>What is your favourite thing about stars? Why do we use lights at night? Should we leave lights on when we don’t need to see what we are doing?</p> <p>Night lights are fine because they’re small and dim - the stars don’t mind those lights because they help children to get to sleep.</p>

The Lost Stars Lesson plan for KS2

<p><u>Warm-Up</u> Create a mind map on the board with “Stars” at the centre. Ask pupils to suggest the ways that we use stars. If they struggle, prompt them with the following ideas: A sailor/pirate - Uses stars as a compass. A fortune teller - Uses stars for astrology (star signs.) A teacher - Gives out gold stars as a reward system. Pinnocchio - Makes wishes on them.</p>	<p><u>How to use the Street lights worksheet (10-20 minutes):</u> There are instructions on the worksheet that briefly explain shielded street lights. Children may need a teacher or teaching assistant to go over the concept with them and answer any questions. <u>Aim:</u> Pupils will discover that shielded street lights are a good compromise; we can have well-lit streets without increasing light pollution.</p>	<p><u>Letter to the Council (Literacy - 30 minutes)</u> Explain that the local council has the power to make streetlights shine less light into the sky. Write a letter to your local council to ask them to change the streetlights so that the light is shielded from the sky. This can be a group exercise, or an individual task, depending on how confident pupils are with writing independently. <u>Optional objectives:</u> Pupils will have learned that communities can be influenced and improved by writing to the local council.</p>
<p><u>Introduction - Read <i>The Lost Stars</i> (5 minutes) and discuss the book (10 minutes):</u> When did the people in the story notice that the stars had left? Hold open the final pages of the book - the spread featuring a family looking up at the sky What has changed since the start of the book? If necessary, turn back to the spread of the town at the start of the book. Draw attention to the ‘Skyglow’ (the yellow glow), the bright signs, the light on the helicopter and the lights on in all of the buildings. Do these signs need to be on at night? Do you think that all of these lights in the buildings need to be on? Explain that ‘light pollution’ refers to the way that the night sky is spoiled by artificial light. <u>Aims of the Introduction:</u> Pupils learn that a yellow sky at night is called “Skyglow” and is caused by light pollution.</p>	<p><u>How to use the fill-in-the-gaps worksheet (Up to 20 minutes):</u> A set of words have been split up into adjectives, verbs and nouns. The spaces have been colour-coded to help work out which word goes where. Pupils may need a teacher or teaching assistant to gently correct them if they have made a mistake. If the exercise is too advanced for your class, turn it into an activity that involves everyone by writing the missing words on the board and going through it with all of them. <u>Aim:</u> Pupils gain a broader understanding of the effects of light pollution</p>	<p><u>Conclusion (5 minutes):</u> Have a class discussion about why we use lights at night. We’ve learned today that light pollution is bad, but can you think of reasons that people may have for wanting to keep so many lights on at night? (If the pupils struggle, show them the city spread from <i>The Lost Stars</i> where people are using lights to see whilst driving, or to read books.) Example answers: Safety, reading/walking/driving at night. Is there a way for us to have lights on at night without causing light pollution? Move on after one or more of these answers: Shielded street lights, turning lights off when we don’t need them, turning off brightly lit signs late at night, timed lights.</p>
<p><u>Homework ideas:</u> Make a poster to remind people to turn off lights when they are no longer needed.</p>	<p><u>Success criteria</u> “I know the causes of light pollution.” “I know that we need lights at night, but I also know that we shine too much of that light into the sky.” “Shielded streetlights can reduce skyglow.”</p>	
<p><u>Objectives:</u> Pupils will have learned why light pollution is bad, and ways that we can reduce the effects of it.</p>		

KS2



Fill in the Gaps!



Nouns: Owls, skylow, people, stars, city, artificial light

Verbs: See, reduce, hide, using, hunt, shine,

Adjectives: Active, nocturnal

When the sky over a town or _____ is yellow at night, this is called

_____.

It is caused when we _____ too much light into the sky.

Skyglow makes it harder for us to see the _____.

Light pollution can confuse _____ animals who are

_____ at night.

Foxes, _____ and other predators find it difficult to _____ their

prey because of _____.

Their prey is more likely to _____ when it is light because predators

are easier to _____.

We can _____ light pollution by turning off lights when we are

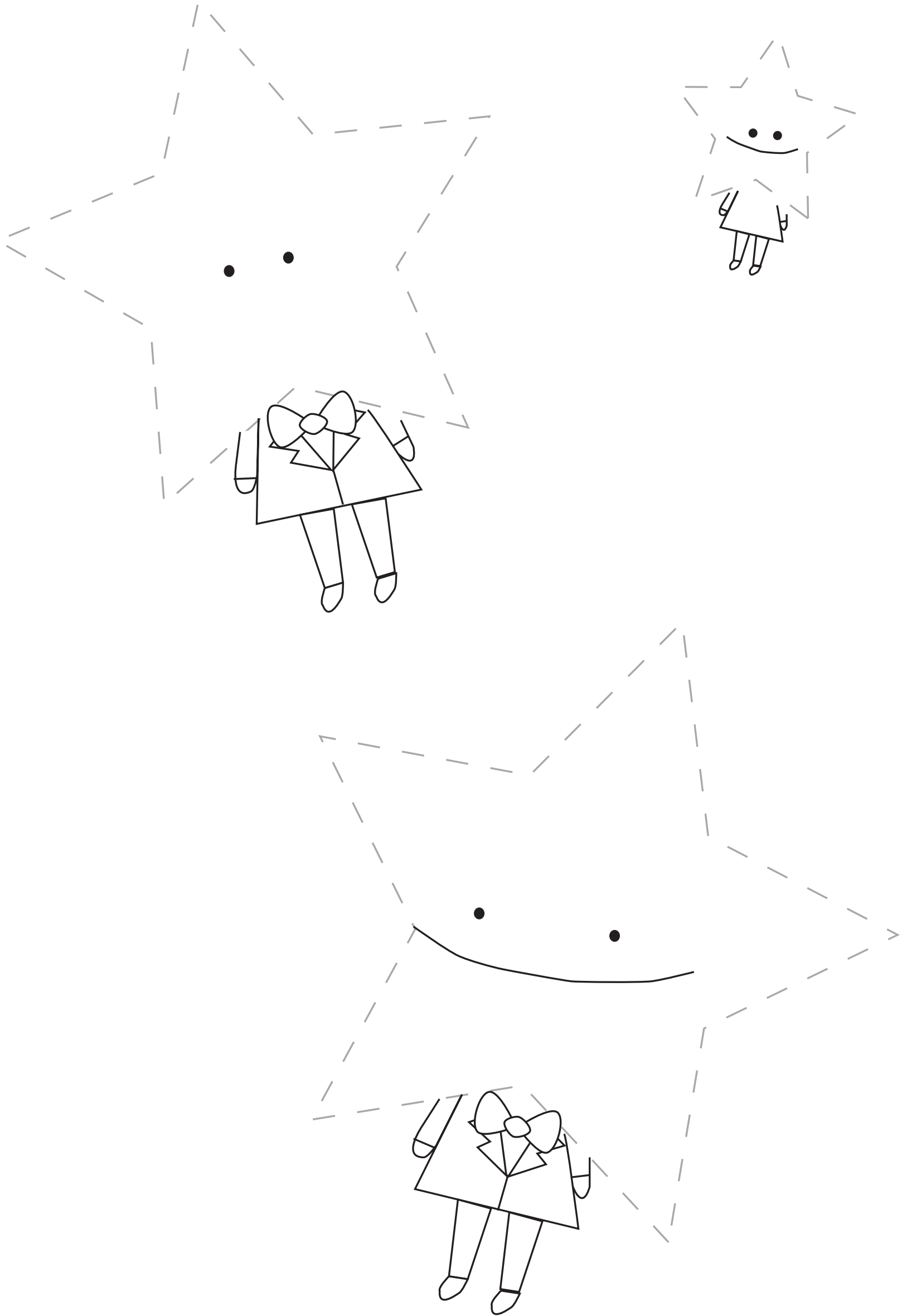
not _____ them.

Light pollution is found in most cities and towns because there are so

many _____ who need to use lights at night.

Pen Control

Use a pen to follow the dashed lines!

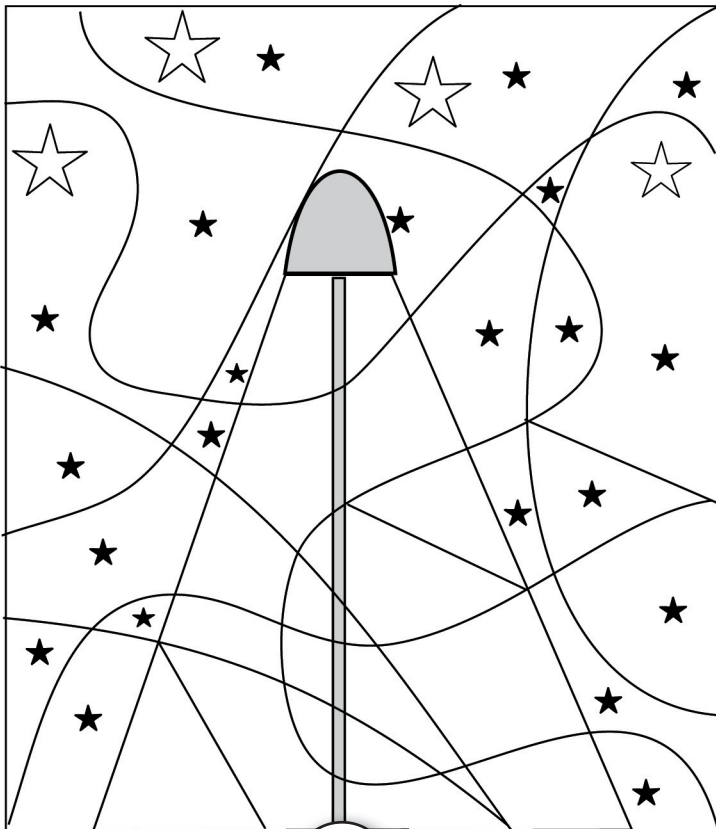


Street lights

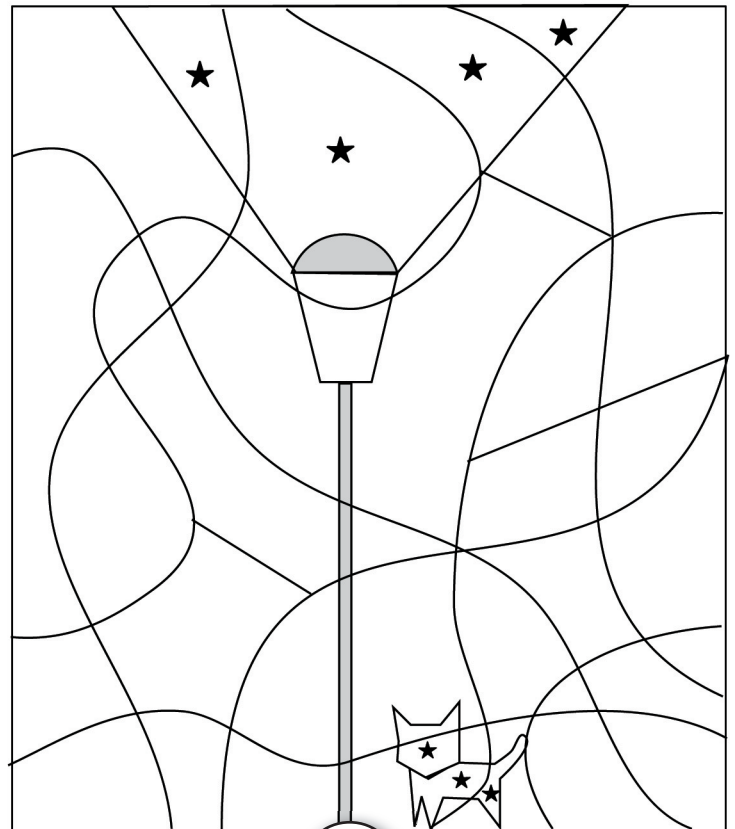
We need street lights to see where we are going when it's dark, but many of them cause light pollution!

Streetlights that shine light directly into the sky can cause skyglow. We can stop this from happening by adding shields to the street lights. The shields block the light from shining upwards – it works like a lampshade.

Below are pictures of two street lights. Use a black crayon to fill in the shapes that have a small, black star in them. Colour the shapes without any stars in them yellow, to show where the light is directed.



A



B

Which street light would cause *less* light pollution - A or B?

Why?

