



Lesson 1 of 2

Working Under the Sun

Created: 04/2026 by the National FFA Organization

Description of Lesson: Students will examine how sun exposure impacts people, crops and livestock in agriculture and identify work situations that increase Ultraviolet (UV)-related health risks.



Student Learning Objectives:

After completing these activities, students will ...

1. Describe how UV radiation affects the human body and agricultural systems.
2. Identify agricultural tasks and careers that increase sun exposure risk.
3. Distinguish between common myths and facts related to sun exposure.

Suggested Grade Level:

Grades 9 and 10 (This lesson is written so instructors can scale up or down based on class needs.)

Suggested Time: 60 minutes (*Time requirements may vary based upon student understanding and class schedule.)

Resources/References:

1. Website: AgExplorer (2023), AgExplorer.FFA.org

Related Resources:

1. 2022 Fall FFA New Horizons Teaching Guide: Appendix 7: 6 Important Farm Safety Tips, <https://FFA.box.com/s/xpbzyu620bddw37o9pcc3nyf2akljija>

Equipment and Supplies Needed:

1. A copy of the "First Day in the Field" student activity sheet for each student
2. A copy of the "UV Exposure Investigation" student activity sheet for each student
3. A copy of the "Agricultural Career Risk Snapshot" student activity sheet for each group
4. A copy of the "Appendix 1: Sun Myth vs. Fact" handout
5. UV beads, cards or bracelets
 - a. UV beads: <https://www.amazon.com/INSPIRELLE-Luminous-Changing-Reactive-Bracelets/dp/B09C5FNOL4>
 - b. UV cards: <https://www.amazon.com/EIDEALTM-Intensity-Identifying-Reading-Indicator/dp/B0BCP26GMS>
 - c. UV bracelets: <https://www.amazon.com/Bracelets-Reactive-Silicone-Bracelet-Birthday/dp/B081KBL5RK>
6. For Activity 1 you will need the following to simulate conditions:
 - a. Hat or fabric
 - b. Clear container or glass
 - c. Soil or dirt
 - d. Shade area
 - e. Direct sun area
7. Optional: Take what you teach in the classroom and allow students to plan an outreach project about sun safety in agriculture using this tailored guide - [Outreach Guide: Sun Safety in Agriculture](#)

Name: _____

Vocabulary:

1. Agricultural Work Environment
2. Eye Damage
3. Heat Stress
4. Hypothesis
5. Observation
6. Occupational Risk
7. Protective Strategy
8. Skin Damage
9. Ultraviolet (UV) Exposure
10. Ultraviolet (UV) Radiation

Cross-Curricular Connections:

Science	English/Language Arts	Technology
Investigate UV radiation by using experimental design, formulating hypotheses, collecting observational data and drawing conclusions on the effects of UV exposure.	Read and analyze an informational narrative, identify misconceptions, justify claims during discussion and reflect in writing.	Use digital tools and online resources to investigate agricultural careers and workplace risks.

SAE and FFA Connections

SAE: Have students create a sun safety plan for their SAEs and include it in their records.

FFA: Have students create a sun safety social media campaign for your FFA chapter to post. Include tips based on industry and activities that your chapter participates in.

Student Activity Sheets:

Direct access to student activity sheets without lesson plan or answer key for easy upload to a learning management system or printing for classwork.

<https://ffa.box.com/s/pow2jtz2cqf14z5b0v0fxr1eof5rot6d> (Word | PDF)

https://docs.google.com/document/d/1cEFebNpthnp6qw_v_HfmLhzDGMcXBSBZfnEmb00Lz8o/view (Google)

These Activities Are Aligned to the Following Standards:

AFNR Performance Element

- FPS.03. Examine and summarize the importance of health, safety and environmental management systems in AFNR workplaces.
- FPS.05. Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food and Natural Resources career pathways.
- FPS.08. Utilize critical thinking to make sense of problems and persevere in solving them.

FFA Precept

- FFA.PL-A.Action A1. Work independently and in groups to get things done.
- FFA.PL-A.Action A4. Identify and use resources.
- FFA.PL-A.Action A8. Evaluate and reflect on actions taken and make appropriate modifications.
- FFA.PL-B.Relationships B2. Interact and work with others.
- FFA.PL-B.Relationships B5. Participate effectively as a team member.
- FFA.PL-C.Vision C1. Contemplate the future.
- FFA.PL-C.Vision C4. Adapt to opportunities and obstacles.
- FFA.PL-D.Character D3. Accept responsibility for personal actions.
- FFA.PL-D.Character D5. Practice self-discipline.
- FFA.PG-G.Physical Growth G2. Respect one's body.
- FFA.PG-G.Physical Growth G4. Set goals for long-term health.
- FFA.PG-I.Professional Growth I1. Plan and implement professional goals and priorities.
- FFA.PG-I.Professional Growth I4. Balance personal and professional responsibilities.
- FFA.PG-J.Mental Growth J1. Think critically.
- FFA.PG-J.Mental Growth J4. Solve problems.

Name: _____

Common Core – Reading: Informational Text

- CCSS.ELA-LITERACY.RI.9-10.1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- CCSS.ELA-LITERACY.RI.9-10.2. Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

Common Core – Writing

- CCSS.ELA-LITERACY.W.9-10.2. Write informative/explanatory texts to examine and convey complex ideas, concepts and information clearly and accurately through the effective selection, organization and analysis of content.
- CCSS.ELA-LITERACY.W.9-10.10. Write routinely over extended time frames (time for research, reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes and audiences.
- CCSS.ELA-LITERACY.W.9-12.9. Draw evidence from literary or informational texts to support analysis, reflection and research.

Common Core – Speaking and Listening

- CCSS.ELA-LITERACY.SL.9-10.1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups and teacher-led) with diverse partners on grades 9-10 topics, texts and issues, building on others' ideas and expressing their own clearly and persuasively.
- CCSS.ELA-LITERACY.SL.9-10.4. Present information, findings and supporting evidence clearly, concisely and logically such that listeners can follow the line of reasoning and the organization, development, substance and style are appropriate to purpose, audience and task.

Common Core – Science & Technical Subjects

- CCSS.ELA-LITERACY.RST.9-10.3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements or performing technical tasks, attending to special cases or exceptions defined in the text.
- CCSS.ELA-LITERACY.RST.9-10.7. Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

Next Generation Science

- Practice 1: Asking Questions and Defining Problems. Ask questions that can be investigated within the scope of the school laboratory, research facilities or field (e.g., outdoor environment) with available resources and, when appropriate, frame a hypothesis based on a model or theory.
- Practice 3: Planning and Carrying Out Investigations. Plan an investigation or test a design individually and collaboratively to produce data to serve as the basis for evidence as part of building and revising models, supporting explanations for phenomena or testing solutions to problems.
- Practice 4: Analyzing and Interpreting Data. Analyzing data in 9-12 builds on K-8 experiences and progresses to introducing more detailed statistical analysis, the comparison of data sets for consistency and the use of models to generate and analyze data.
- Practice 6: Constructing Explanations and Designing Solutions. Apply scientific reasoning, theory and/or models to link evidence to the claims to assess the extent to which the reasoning and data support the explanation or conclusion.
- Practice 8: Obtaining, Evaluating, and Communicating Information. Communicate scientific and/or technical information or ideas (e.g., about phenomena and/or the process of development and the design and performance of a proposed process or system) in multiple formats (i.e., orally, graphically, textually, mathematically).

AFNR Career Ready Practices

- CRP.01. Act as a responsible and contributing citizen and employee.
- CRP.03. Attend to personal health and financial well-being.
- CRP.08. Utilize critical thinking to make sense of problems and persevere in solving them.

Partnership for 21st Century Skills

- Collaboration
- Communication
- Critical Thinking and Problem Solving
- Health Literacy
- Information Literacy
- Leadership and Responsibility
- Productivity and Accountability

Name: _____

Lesson Plan:

1. **Bell Ringer:** Think about a time you were outside for more than an hour. What did you do to protect yourself from the sun? List all the ways.
2. **Introduction:**
Say: In agriculture, the sun is a vital part of the job. But this doesn't mean that the sun is harmless. Today, we are going to look at what sun exposure really does to our bodies as well as how it affects animals and crops. We will also discuss why this matters for different agricultural careers.

Before getting hands-on, assess how much your students already know about sun safety in agriculture. Each student needs a copy of the "First Day in the Field" student activity sheet. Independently, they will read the short story and answer the questions. Then, host a whole-class discussion with the following questions:

- Even though it wasn't extremely hot, what was still happening to Jordan's skin?
- How can UV radiation affect the body without immediate pain?
- What agricultural risks do you already see in this story?
 - o Heat stress
 - o Skin damage
 - o Eye strain or damage

Say: Jordan's experience is extremely common in agriculture, and it's exactly why we need to understand what UV radiation does and why sun exposure is more than just "part of the job."

3. **Activity:**

Part 1: Each student needs a copy of the "UV Exposure Investigation" student activity sheet.

Teacher Setup (Before Class)

- Prepare UV-sensitive beads/cards/bracelets
- Gather materials to create different exposure conditions:
 - o Hat or fabric
 - o Clear container or glass
 - o Soil or dirt
 - o Area of shade
- This activity works best outside; however, a sunny window will also work.

Say: Before we talk about sun exposure in agriculture, we're going to test how UV radiation behaves. UV rays are invisible, and you cannot feel them right away, but that doesn't mean they aren't having an impact.

Explain that the beads/cards/bracelets that you are using will change colors when exposed to UV radiation and that they should keep the items covered from the sun until it's time for the tests. Depending on the UV item being used, describe to students what will happen when this item is placed into UV exposure, including color changes, intensity levels, etc. This will help them know what they are observing during testing. The conditions being simulated will be similar to conditions found in agriculture. Students will be testing each condition: direct sunlight, shade, under plastic/glass, covered with soil and covered by a hat or other fabric. Set the conditions up as stations. Give each student five total of whatever UV item they will be testing (beads, cards, bracelets). Students will rotate every two minutes. Even though there will be a group of students at each station, they are working independently on this part.

Before testing their beads/cards/bracelets, students will formulate a hypothesis. Then they will place their UV item into the condition and observe for 60 seconds. Students will record any color change they notice and how intense the color is. When they rotate to a new station, they will need a new UV item to test. After rotating through the stations, students will answer the questions.

Say: When UV radiation hits your skin, it penetrates the outer layers and damages the skin cells, even if you don't feel it right away. This damage can add up over time. The sun can also damage nonhuman things such as farm equipment, plants and animals. It's important that equipment is stored properly, plants are growing with correct sun needs in mind and animals have a way to escape the sun.

Name: _____

Part 2: Each student will need a copy of the “Agricultural Career Risk Snapshot” student activity sheet.

Separate students into small groups of no more than three each. Working in their groups, students are going to connect UV exposure and occupational risks to real agricultural careers and identify realistic protections. Once groups are formed, assign each group one of the following agricultural careers:

1. Harvester/Picker
2. Feedlot Manager
3. Greenhouse Manager
4. Landscape Technician
5. Drone Technician
6. Machine/Equipment Operator
7. Forester
8. Veterinarian
9. Farrier
10. Game Warden

Say: We've seen that UV exposure can still happen in conditions that feel safer, like shade or under glass. Now we're going to connect that to agricultural careers. Different agricultural careers have different UV risks, and your job is to figure out what's most risky and what protection makes sense.

Explain to the class that their group will use the AgExplorer website (AgExplorer.FFA.org), and other appropriate websites, to develop a risk snapshot for their assigned careers. This will be a quick, evidence-based summary of how sun exposure shows up in that career. After students have developed their risk snapshot, have each group share their career, the biggest risk and one protection strategy.

Say: What your group did is what real safety planning looks like in agriculture: identifying the conditions that increase risk and choosing protection strategies that match the job. UV exposure isn't random; it's predictable based on tasks, time and setting.

4. Follow-up:

Now that students have explored the effects of UV radiation and connected sun safety to careers within agriculture, test their knowledge by asking a series of statements that could be myths or facts. As you read through the statements found in the “Appendix 1: Sun Myth vs. Fact” handout, students will decide if it is a myth or a fact. Students will give a thumbs up if the statement is a fact and a thumbs down if the statement is a myth. Call on one or two students to justify each statement.

Say: Understanding the risk is step one. The next question is: What do people in the agricultural sector do about it? That's where we are headed in the next lesson.

5. Optional – Extended Learning Opportunities (Not factored into time requirement):

- a. Students will connect with someone working in the agriculture industry and interview them about their sun exposure and safety habits. They must present what they learn in one of the following formats: a podcast episode, a video mini-episode or a PowerPoint presentation. The following questions are required:
 - How much of your workday is spent outdoors?
 - What do you do to protect yourself from the sun?
 - What sun-related challenges come with your job?
 - What advice would you give a student entering agriculture?

6. **Exit Ticket:** Based on what you've learned today, what is one belief about sun exposure in agriculture that you would challenge or change?

Name: _____

First Day in the Field

Directions: Read the short story below and answer the questions. Be ready to discuss further as a class.

Jordan is a sophomore in FFA who just landed a part-time job working afternoons at a local vegetable farm. It's early May, and Jordan is excited! This job will look great on his SAE record and will help him save up for a truck.

On the first day, Jordan throws on an old T-shirt, a ball cap and sunglasses left over from last summer. He packs a lunch with several snacks and fills a large water bottle. Sunscreen doesn't even cross his mind.

"I'm not worried," Jordan tells a friend. "It's not even that hot yet! Plus, I'm only working for a few hours. It will be okay. I tan easily; I never burn!"

By mid-afternoon, Jordan has been transplanting seedlings for hours. The sun feels intense and there's no shade in the field. Sweat keeps dripping into his eyes as they squint against the glare. He is staying hydrated though, having drunk two whole bottles of water so far.

Later in the day, when Jordan finally gets home, his skin feels tight and hot. His neck and arms are red, and his eyes are feeling irritated and itchy.

"That's just all part of working hard outside," Jordan thinks to himself. "Farmers deal with this all the time. If they can do it, I'll be fine ... I want to be a farmer one day, so I need to get used to it."



1. What does Jordan believe about the sun?
2. Go back and underline all the assumptions and misconceptions you noticed. Which stands out to you the most? Explain why.
3. Describe one instance where you see UV exposure risk.
4. Which part of the story do you think could lead to long-term problems and not just discomfort? Explain why.
5. What are two changes you would have made if you were in Jordan's boots?

Name: _____

UV Exposure Investigation

Aligned to the following standards: FPS.03, FPS.05, FPS.08, FFA.PL-A, FFA.PL-B, FFA.PL-C, FFA.PL-D, FFA.PG-G, FFA.PG-I, FFA.PG-J, CCSS.RI.9-10.1, CCSS.RI.9-10.2, CCSS.W.9-10.2, CCSS.W.9-10.10, CCSS.W.9-12.9, CCSS.SL.9-10.1, CCSS.SL.9-10.4, CCSS.RST.9-10.3, CCSS.RST.9-10.7, NGSS Practice 1, NGSS Practice 3, NGSS Practice 4, NGCC Practice 6, NGSS Practice 8, CRP.01, CRP.03, CRP.08

Directions: Working independently, you will rotate through all five stations to test the UV exposure of each.

For **each condition**, you will:

- ❖ Write a hypothesis (what you think will happen and why).
- ❖ Test the UV item (beads/cards/bracelets).
- ❖ Record your observations.
- ❖ Decide whether UV exposure is high, moderate, low or blocked.
- ❖ Connect your results to agriculture-related risks.

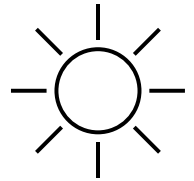
Steps to test each condition:

1. Formulate your hypothesis.
2. Place the UV item into the condition and let it sit for 60 seconds.
3. Record observations.
4. Remove your tested item.
5. Finish the sections on your activity sheet for that condition.

Condition: Direct Sunlight

Hypothesis (before testing):

What do you think will happen to the UV item in direct sunlight? Why?
If I (insert action), then (predict result), because (reason).



Observations (during testing):

Write down what you notice: color changes, speed of change, intensity of color, etc.

Conclusion:

Circle the UV exposure level: High Moderate Low Blocked

Agriculture Connection:

When/where in the agricultural field would you see this condition?

Who/what does this condition affect most?

How could this level of UV exposure affect a person working in this condition?

Name: _____

Condition: Shade

Hypothesis (before testing):

What do you think will happen to the UV item in the shade? Why?

If I (insert action), then (predict result), because (reason).



Observations (during testing):

Write down what you notice: color changes, speed of change, intensity of color, etc.

Conclusion:

Circle the UV exposure level: High Moderate Low Blocked

Agriculture Connection:

When/where in the agricultural field would you see this condition?

Who/what does this condition affect most?

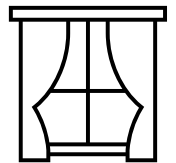
How could this level of UV exposure affect a person working in this condition?

Condition: Under Plastic/Glass

Hypothesis (before testing):

What do you think will happen to the UV item under plastic/glass? Why?

If I (insert action), then (predict result), because (reason).



Observations (during testing):

Write down what you notice: color changes, speed of change, intensity of color, etc.

Name: _____

Conclusion:

Circle the UV exposure level: High Moderate Low Blocked

Agriculture Connection:

When/where in the agricultural field would you see this condition?

Who/what does this condition affect most?

How could this level of UV exposure affect a person working in this condition?

Condition: Covered With Soil/Dirt

Hypothesis (before testing):

What do you think will happen to the UV item when covered with soil/dirt? Why?

If I (insert action), then (predict result), because (reason).



Observations (during testing):

Write down what you notice: color changes, speed of change, intensity of color, etc.

Conclusion:

Circle the UV exposure level: High Moderate Low Blocked

Agriculture Connection:

When/where in the agricultural field would you see this condition?

Who/what does this condition affect most?

How could this level of UV exposure affect a person working in this condition?

Name: _____

Condition: Covered With a Hat or Fabric

Hypothesis (before testing):

What do you think will happen to the UV item when covered with a hat or fabric? Why?
If I (insert action), then (predict result), because (reason).



Observations (during testing):

Write down what you notice: color changes, speed of change, intensity of color, etc.

Conclusion:

Circle the UV exposure level: High Moderate Low Blocked

Agriculture Connection:

When/where in the agricultural field would you see this condition?

Who/what does this condition affect most?

How could this level of UV exposure affect a person working in this condition?

1. Which condition surprises you the most? Why?
2. Did any condition completely block UV radiation? Explain.
3. Based on your results, list two occupational risks agricultural workers face related to sun exposure.

Agricultural Career Risk Snapshot

Name: _____

8. Explain why these risks apply.

Step 3: Risk Snapshot

9. Identify one specific time or situation when sun exposure risk is the highest for this career.

10. Describe one realistic sun safety strategy someone in this career could use and explain why it would help.

Strategy: _____

Why does this work?

Step 4: Reflect

11. Based on what you learned, how could this information apply to your own future in agriculture, FFA activities, an SAE or even your everyday life?

Name: _____

Key: First Day in the Field

Aligned to the following standards: FPS.03, FPS.05, FPS.08, FFA.PL-A, FFA.PL-B, FFA.PL-C, FFA.PL-D, FFA.PG-G, FFA.PG-I, FFA.PG-J, CCSS.RI.9-10.1, CCSS.RI.9-10.2, CCSS.W.9-10.2, CCSS.W.9-10.10, CCSS.W.9-12.9, CCSS.SL.9-10.1, CCSS.SL.9-10.4, CCSS.RST.9-10.3, CCSS.RST.9-10.7, NGSS Practice 1, NGSS Practice 3, NGSS Practice 4, NGCC Practice 6, NGSS Practice 8, CRP.01, CRP.03, CRP.08

Directions: Read the short story below and answer the questions. Be ready to discuss further as a class.

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"I'm not worried," Jordan tells a friend. "It's not even that hot yet! Plus, I'm only working for a few hours. It will be okay. I tan easily; I never burn!"

By mid-afternoon, Jordan has been transplanting seedlings for hours. The sun feels intense, but there's no shade in the field. Sweat keeps dripping into his eyes as they squint against the glare. He is staying hydrated though, having drunk two whole bottles of water so far.

Later in the day, when Jordan finally gets home, his skin feels tight and hot. His neck and arms are red, and his eyes are feeling irritated and itchy.

"That's just all part of working hard outside," Jordan thinks to himself. "Farmers deal with this all the time. If they can do it, I'll be fine ... I want to be a farmer one day, so I need to get used to it."



1. What does Jordan believe about the sun?
Answers will vary.
2. Go back and underline all the assumptions and misconceptions you noticed. Which stands out to you the most? Explain why.
Answers will vary.
3. Describe one instance that you see UV exposure risk.
Answers will vary.
4. Which part of the story do you think could lead to long-term problems and not just discomfort? Explain why.
Answers will vary.
5. What are two changes you would have made if you were in Jordan's boots?
Answers will vary.

Name: _____

Aligned to the following standards: FPS.03, FPS.05, FPS.08, FFA.PL-A, FFA.PL-B, FFA.PL-C, FFA.PL-D, FFA.PG-G, FFA.PG-I, FFA.PG-J, CCSS.RI.9-10.1, CCSS.RI.9-10.2, CCSS.W.9-10.2, CCSS.W.9-10.10, CCSS.W.9-12.9, CCSS.SL.9-10.1, CCSS.SL.9-10.4, CCSS.RST.9-10.3, CCSS.RST.9-10.7, NGSS Practice 1, NGSS Practice 3, NGSS Practice 4, NGCC Practice 6, NGSS Practice 8, CRP.01, CRP.03, CRP.08

Key: UV Exposure Investigation

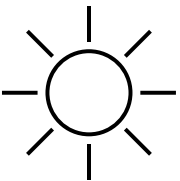
Directions: Working independently, you will rotate through all five stations to test the UV exposure of each.

For **each condition**, you will:

- ❖ Write a hypothesis (what you think will happen and why).
- ❖ Test the UV item (beads/cards/bracelets).
- ❖ Record your observations.
- ❖ Decide whether UV exposure is high, moderate, low or blocked.
- ❖ Connect your results to agriculture-related risks.

Steps to test each condition:

1. Formulate your hypothesis.
2. Place the UV item into the condition and let it sit for 60 seconds.
3. Record observations.
4. Remove your tested item.
5. Finish the sections on your activity sheet for that condition.

Condition: Direct Sunlight	
<i>Hypothesis (before testing):</i> What do you think will happen to the UV item in direct sunlight? Why? <i>If I (insert action), then (predict result), because (reason).</i> <i>Answers will vary.</i>	
<i>Observations (during testing):</i> Write down what you notice: color changes, speed of change, intensity of color, etc. <i>Answers will vary.</i>	
<i>Conclusion: Answers will vary.</i> Circle the UV exposure level: High Moderate Low Blocked	
<i>Agriculture Connection:</i> When/where in the agricultural field would you see this condition? <i>Answers will vary.</i> Who/what does this condition affect most? <i>Answers will vary.</i> How could this level of UV exposure affect a person working in this condition? <i>Answers will vary.</i>	

Name: _____

Condition: Shade

Hypothesis (before testing):

What do you think will happen to the UV item in the shade? Why?

If I (insert action), then (predict result), because (reason).

Answers will vary.



Observations (during testing):

Write down what you notice: color changes, speed of change, intensity of color, etc.

Answers will vary.

Conclusion: Answers will vary.

Circle the UV exposure level: High Moderate Low Blocked

Agriculture Connection:

When/where in the agricultural field would you see this condition?

Answers will vary.

Who/what does this condition affect most?

Answers will vary.

How could this level of UV exposure affect a person working in this condition?

Answers will vary.

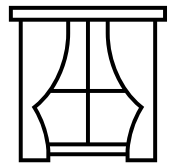
Condition: Under Plastic/Glass

Hypothesis (before testing):

What do you think will happen to the UV item under plastic/glass? Why?

If I (insert action), then (predict result), because (reason).

Answers will vary.



Observations (during testing):

Write down what you notice: color changes, speed of change, intensity of color, etc.

Answers will vary.

Conclusion: Answers will vary.

Circle the UV exposure level: High Moderate Low Blocked

Name: _____

Agriculture Connection:

When/where in the agricultural field would you see this condition?

Answers will vary.

Who/what does this condition affect most?

Answers will vary.

How could this level of UV exposure affect a person working in this condition?

Answers will vary.

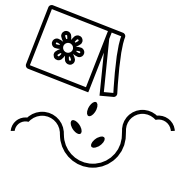
Condition: Covered With Soil/Dirt

Hypothesis (before testing):

What do you think will happen to the UV item when covered with soil/dirt? Why?

If I (insert action), then (predict result), because (reason).

Answers will vary.



Observations (during testing):

Write down what you notice: color changes, speed of change, intensity of color, etc.

Answers will vary.

Conclusion: Answers will vary.

Circle the UV exposure level: High Moderate Low Blocked

Agriculture Connection:

When/where in the agricultural field would you see this condition?

Answers will vary.

Who/what does this condition affect most?

Answers will vary.

How could this level of UV exposure affect a person working in this condition?

Answers will vary.

Condition: Covered With a Hat or Fabric

Hypothesis (before testing):

What do you think will happen to the UV item covered with a hat or fabric? Why?

If I (insert action), then (predict result), because (reason).

Answers will vary.



Name: _____

Observations (during testing):

Write down what you notice: color changes, speed of change, intensity of color, etc.

Answers will vary.

Conclusion: Answers will vary.

Circle the UV exposure level: High Moderate Low Blocked

Agriculture Connection:

When/where in the agricultural field would you see this condition?

Answers will vary.

Who/what does this condition affect most?

Answers will vary.

How could this level of UV exposure affect a person working in this condition?

Answers will vary.

1. Which condition surprises you the most? Why?
Answers will vary.
2. Did any condition completely block UV radiation? Explain.
Answers will vary.
3. Based on your results, list two occupational risks agricultural workers face related to sun exposure.
Answers will vary.

Name: _____

Key: Agricultural Career Risk Snapshot

Aligned to the following standards: FPS.03, FPS.05, FPS.08, FFA.PL-A, FFA.PL-B, FFA.PL-C, FFA.PL-D, FFA.PG-G, FFA.PG-I, FFA.PG-J, CCSS.RI.9-10.1, CCSS.RI.9-10.2, CCSS.W.9-10.2, CCSS.W.9-10.10, CCSS.W.9-12.9, CCSS.SL.9-10.1, CCSS.SL.9-10.4, CCSS.RST.9-10.3, CCSS.RST.9-10.7, NGSS Practice 1, NGSS Practice 3, NGSS Practice 4, NGCC Practice 6, NGSS Practice 8, CRP.01, CRP.03, CRP.08

Directions: In your group, research your assigned agricultural career and connect UV exposure to the associated occupational risks, then identify realistic protections. Use the AgExplorer website to assist you: AgExplorer.FFA.org.

Step 1: Background Information

1. Assigned career: **Answers will vary.**
2. Describe the typical work setting.
Answers will vary.
3. List two or three tasks a person in this career would do.

❖ **Answers will vary.**

❖
4. Is there a specific season of the year for this career? Explain.
Answers will vary.
5. Is there a specific time of day a person in this career would work? Explain.
Answers will vary.

Step 2: Sun Exposure and Protection

6. List specific tasks or work settings in this career where UV exposure occurs (list at least two).
Answers will vary.
7. Circle the top two sun-related occupational risks that most likely exist for this career: **Answers will vary.**
 - a. Heat Stress
 - b. Skin Damage
 - c. Eye Damage
 - d. Dehydration
 - e. Other: _____

Name: _____

8. Explain why these risks apply.

Answers will vary.

Step 3: Risk Snapshot

9. Identify one specific time or situation when sun exposure risk is the highest for this career.

Answers will vary.

10. Describe one realistic sun safety strategy someone in this career could use and explain why it would help.

Strategy: Answers will vary.

Why does this work?

Answers will vary.

Step 4: Reflect

11. Based on what you learned, how could this information apply to your own future in agriculture, FFA activities, an SAE or even your everyday life?

Answers will vary.

Name: _____

Appendix 1: Sun Myth vs. Fact

If it's not extremely hot, sun exposure isn't a big risk. (Myth)
Working in shade or under glass means you're protected from UV radiation. (Myth)
Some agriculture careers have higher sun risk than others. (Fact)
People who tan easily don't need to worry as much about sun damage. (Myth)
Eye damage can be a sun-related occupational risk in agriculture. (Fact)
Sun exposure risks in agriculture increase during certain times of day. (Fact)
Cloudy days are safer for working outside because the sun isn't as strong. (Myth)
Once your skin tans, it is protected from further sun damage. (Myth)
Ignoring early signs of sun stress can lead to long-term health problems. (Fact)
You only need sunscreen if you are working outside in direct sunlight all day. (Myth)