3a

I - Our program was designed to be a resource for people who want to learn astronomy and other science topics, but don't have that much experience. We based our topics and information with that in mind to be a good intro to a topic that could then be expanded later. The quiz at the bottom can then serve as a measure of how well they understand and consequently if they can move on.

II -In the video we demonstrated how to navigate our website, how to interact with the different features including the drop down menu for extra images and other features, and how to use the quiz feature.

III - In the video we demonstrated user and timer inputs including, navigation, advertisements, quiz answers, grading the quizes, using the back and next buttons, viewing extra images, and viewing other topics. The outputs include answers in a list, new ads, and grading the quiz.

3b

I-

```
var myAnswers = [""];

function addToAnswers(answer){
    myAnswers.push(answer);
}

var rightAnswers = ["1.1",
                    "2.3",
                    "3.2"];
```

II-

```
function checkAnswers(){
    var checkOne = rightAnswers.indexOf(myAnswers[0]);
    if(checkOne == "-1"){correctAnswers = 0}
    else if(checkOne == "1"){correctAnswers = correctAnswers + 1};
    var checkTwo = rightAnswers.indexOf(myAnswers[1]);
    if(checkTwo == "-1"){correctAnswers = correctAnswers + 0}
    else if(checkTwo == "2"){correctAnswers = correctAnswers + 1};
    var checkThree = rightAnswers.indexOf(myAnswers[2]);
    if(checkThree == "-1"){correctAnswers = correctAnswers + 0}
    else if(checkThree == "3"){correctAnswers = correctAnswers + 1};
    alert('You got ' + this.correctAnswers + ' correct');
}
```

III - The purpose of the code above is to receive the user's input answers from different buttons and to input them into a list for grading later. The second section of code is how we use the code to grade the user's answers.

IV - In the video we show how the user would input their answers and how they would receive their grades. We also demonstrate how they could change their answers before getting them graded and how it grades the different answers from the three to five questions on the quiz.

V -The input demonstrated in the video includes how the user would select their answers using the different buttons and how they would then output a function that would input their answers into a list for further grading and changing. In this list they would be used as input for the grading button and function as their listed values would be compared to the answers list. If they didn't match the output would be 0 for that question, and if they did match they would output a 1 for that question. Those totals are then added up to create the final grade which is presented to the user through a popup.

3c

I -

```
function randomAd(idTag){
    document.getElementsByClassName("advertisments").src = pics[picIndex];
    picIndex++;
    if(picIndex == pics.length){
        picIndex = 0;
    }
}
```

II -

```
<img src = "images/life cycle of stars 1.jpg" class = "mainImage">

    <img src = "images/life cycle of stars 2.jpg" class = "otherImages">

    <img src = "images/life cycle of stars 3.jpg" class = "otherImages">

    <img src = "images/life cycle of stars 4.jpg" class = "otherImages">

<img src = "images/advertisment1.jpg" class = "advertisments" onclick = "randomAd()">
```

III- The function is shown above changes the different advertisements for the website. It is controlled by a timer that every time it goes up by a minute the ad changes. The function works by getting the id of the desired changed element and changing the source of the image from a list of advertisements. The function then increments a value to make sure that every single advertisement is displayed at least once and that it repeats after to show the last one in the list. With this function working we can display different advertisements that allow our educational website to stay free for use.

IV- The function works by having a list of images in a variable ready for use along with a valued variable initially set at 0. Once an if-else statement is fired in the timer section it activates this function. The function then gets the id of the image we want to change as changes the source of the image using the list of images. Then it increments the valued variable to 1 and repeats every time called. Once the valued variable is equal to the length of the list it is made 0 to loop the images again.

3d

I - The first call is from the timer that has an if-else statement controlling when it calls the function shown above.
The second call is from the website itself to initially placing an advertisement on the website to start the timer again.

II - The first call's conditions are from an if-else statement in a timer that controls when the function is called based on how many seconds have passed since it last called the function. The conditionals are based on what the current image of the advertisement is and the current valued variable value which resets if equal to length.
The second call's conditional is from the website to start the advertisements and the timer. The current image is shown and the valued variable is also conditionals here for the initial starting of the looped first call.

III - The first call switches the advertisements every 1 minute since the website was originally loaded, and it is in a constant loop of repeating until the website is closed by the user.
The second call starts the advertisements displaying for the user on the website and starts the timer so that the first call can start its loop allowing the advertisements to continuously switch.