

Mars Base Camp – Intro, Using the Facilitator Guide and Unboxing

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Torey Earle: Hi everybody, my name is Torey Earle, and I am an Extension Specialist for 4-H Youth Development with the University of Kentucky College of Agriculture, Food and Environment Cooperative Extension Service.

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Torey Earle: We're here today to introduce you to this year's national 4-H STEM Challenge which is called Mars Base Camp. Mars Base Camp is an experiment that contains four different segments that are designed to help us figure out how we're going to get people to Mars.

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Torey Earle: How we're going to move around once we get up there. How are we going to sustain ourselves with food while we're on Mars, and then how are we going to send information back to Earth. Now some of you may be asking, is this different than the 4-H National Youth Science Day

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Torey Earle: The short answer is no. It's not that much different. Our friends at National 4-H Council and other Land Grant Universities that have helped develop experiments in the past realized that

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Torey Earle: Individuals and educators were not just using the 4-H National Youth Science Day on the day of the experiment or during the month of the experiment, but they were using it all year round.

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Torey Earle: So, what they did is they completely rebranded to the national for each stem challenge and it is designed from the ground up to be used, year round.

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Torey Earle: So, as we go through today and unbox some of the kits that you're going to get to see what's in them.

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Torey Earle: And then in other segments, we're going to go through the kits individually and each individual experiment to hopefully teach you how to use it and how to teach it, either in person or maybe virtually. So, as we start with this.

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Torey Earle: Let me say that another change this year is that we have two different kits. We actually have an educator kit which is designed to accommodate up to 12 youth.

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Torey Earle: And we also have family kits the family kits are designed for two to four youth and can be ordered and done by a family at home. So, we'll go through the educator kit but I'll also tell you what's a little different in the family kit. So, without any further ado, let's get started.

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Torey Earle: The Facilitator Guide that comes with your experiment kit is one of the best tools that you're going to have for walking you through each of the activities in the experiment, it's set up in a step by step format which will direct the facilitator to everything they need to do.

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Torey Earle: Each one of the activities will have a set of goals and objectives at the beginning of it.

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Torey Earle: I will have a list of materials that are included in the kit that you will need to use it will have a suggested list of materials that might not be in the kit but you can source in other places, very simple things like office supplies, things like that.

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Torey Earle: And then it will list the vocabulary words or the terminology that that will be talked about within that activity.

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Torey Earle: It will list some opening questions that you as a facilitator can ask, and it will also provide you reflection questions and things like that toward the end of the experiment.

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Torey Earle: Each one of the activities is set up in a do reflect and apply format this format allows participants to get their hands on and do the activity.

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Torey Earle: Then they would reflect on Some of the things they may have learned from the activity which there are questions and your Facilitator Guide to help bring that about.

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Torey Earle: Then the apply part is taking it to a real life situation or scenario how would they apply that to what they want to do next. So, in using your Facilitator Guide

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Torey Earle: Please, please, please go through it. Make sure that you know what all is in it and it will be one of the biggest tools to help you in these activities.

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Torey Earle: We have here are the two different kits. The one on my right is the educator kit. The one on my left is the family, kid.

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Torey Earle: The main difference is the number of youth that the two kits will serve the educator kit is designed to So,rt of toil, whereas the family kit is designed to serve two to four.

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Torey Earle: Will go through the differences. No, I'll talk to you about what is not in the family kit that is in the educator, kid. And we're going to pull Some stuff out and show you what is here for the different experiments. So, as you open your box up

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Torey Earle: The first thing that you'll have is your Facilitator Guide. Now this Facilitator Guide will walk you through step by step how to do the experiments.

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Torey Earle: It will also provide you scripts that you can use and talking points as well as key vocabulary terms that youth will learn from each of the experiments. In addition to that,

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Torey Earle: The educator kit contains 12 you've got. Now, this gives you participating a chance to take notes. It gives some information about the different experiments and it gives an idea of some of the things that they will need to do when they're doing an experiment.

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Torey Earle: But as you go through the different thing. There are four different parts to the entire experiment marsh base camp. The first one is called landing zone surveyor and in landing zone surveyor, you're going to receive a map of the surface of Mars.

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Torey Earle: Light out on the floor. It's a vinyl my out. So, it's very durable and on get our grid squares. A to D and one, two for

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Torey Earle: The idea is to land on Mars, you're going to have to get your lander to land on one of these grid squares. The landers themselves like this when they're boxed up but when they're not boxed up

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Torey Earle: It looks like this. It's a little parachute style lander, and we'll talk about how to conduct that in our next segment. But right now, we're just going to go through what's in the kit and what goes with each experiment.

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Torey Earle: Post it Notes going with the landing zone surveyor the post it notes are for youth to mark the place where they have landed on the grid.

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Torey Earle: When they land on a spot on the grid, they will get to get one of the landing cards which if you look are coded A one, A two, all the way through D for

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00:07:03.210 --> 00:07:19.470

Torey Earle: And they correspond to the grid squares. So, whatever grid score they land on they'll get to pick up one of these cards and learn a little bit more about that spot on the surface Mars now landings don't always go like we think they ought to. So, there's a little bit of random

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Torey Earle: random things that could happen on a landing. So, as they would land on a grid square

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Torey Earle: One of two things can happen. They can have a safe landing depending on the grid square they land on or

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Torey Earle: Another grids, where they might land down, they would actually have to roll a die and whatever numbers come up, they would

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Torey Earle: Look in their, their youth gap or you would look in the Facilitator Guide and save what the consequences were

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Torey Earle: Chances are, Some of them would have a safe landing and get to proceed. Others might have to go back and try the landing at the end. So, that's what the Dyess for and those are the four components to the landing zone serving

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Torey Earle: The second of the experiments in the overall march base camp is called Red Planet Odyssey.

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Torey Earle: And it red planet Odyssey. It deals with the moving around on Mars. So, what you're going to get to do is build a rover.

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Torey Earle: For motion on Mars, then you will also design an obstacle course to see if your rover can make it over or through that particular obstacle course now in building the rover. It does come in pieces.

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Torey Earle: There are instructions for building the rover in it, but

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Torey Earle: Feel free to get creative with it too. Because as you'll see when we do the segment on building the rover.

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Torey Earle: We might have to do a little modification of it from time to time. So, keep that in mind. The

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Torey Earle: Educator kit comes with three of the rover's the family kit comes with one of the rovers

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Torey Earle: And also, I forgot to mention on the landing zone surveyor, the family kit comes with one lander and the educator kit comes with for

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Torey Earle: The third experiment deals with growing our food on Mars, and that is called crop curiosity crop curiosity is a card game very similar to Canasta

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Torey Earle: Now if you've never played Canasta which I had not the Facilitator Guide does walk you through and gives you a very good explanation of what each move is about what

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Torey Earle: What you need to collect what you need to try to avoid and things like that. But it is a card game, and the idea of it is to collect the cards for the

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Torey Earle: Elements of the food process that you would need on Mars. And in doing that, you also have the crop curiosity collection cards and these are all of the things that you would need to collect

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Torey Earle: There are six of these in the facilitator kit. Our educator, he had, excuse me, and there are three decks of the Curia crop curiosity cards in the educator kit.

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Torey Earle: Now, to keep track of what you've collected on the collection cards, the educator kit comes with 60 of these little place markers, the family kit comes with 20

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Torey Earle: There are six of these cards and the educator kit. There are two of those cards in the family kit.

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Torey Earle: Now,

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Torey Earle: And doing this. There are ways that

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Torey Earle: You might be able to make the game last longer or shorter. And when we go into that segment of crop curiosity with one of our videos will talk about ways that you can do that but crop curiosity is the third part of

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Torey Earle: This year's for HCM challenge.

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Torey Earle: The fourth part deals with what we've been working with the past couple of years in the nationally science day and that's computer science.

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Torey Earle: And it is called insight from Mars, you are sending back your story of what you have found on Mars to Earth, that's the scenario in doing that, you're going to use scratch programming and

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Torey Earle: There is a a pre built program for you to use. And then these cards are in the kit. They are scratch action cards.

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Torey Earle: Gives you a challenge on the front of it and then on the back. If you need a little help. If you're, you're, get a little stuck.

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Torey Earle: Challenges on the front and the code that you would need to use to make you successful is on the back. So, each one of those cards provides a challenge and a So,lution as well.

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Torey Earle: The educator kid also comes with a USB drive that the USB drive contains the majority of the printable materials that are in the kid.

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Torey Earle: The family kit does not have a USB drive. But the majority of those principles are also going to be downloadable from the National for HTM challenge website.

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Torey Earle: So, that is the boxing of the educator kit and the smaller family kit. We did not unbox but you saw basically everything that's in it as well.

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Torey Earle: So, our next video is going to be how to conduct the landing zone survey or challenge.