

Welcome!

You are joining a thriving community of schools and universities that use the power of location to make better decisions. You are engaging in a process that will transform the way your teachers teach by enabling their students to discover, use, make, and share maps and apps built on a foundation of critical thinking and spatial analyses. While mapping and analysis skills are particularly relevant to STEM education, the art and science of GIS can be taught across almost any subject matter. Offering ArcGIS® to all teachers in your school is giving them the tools they need to help students develop valuable critical-thinking skills, and to ask more meaningful questions about their community and the world around them.

To help you get started, we have provided a simple guide for deploying ArcGIS to your entire school. This guide shows you how to prepare and begin making maps as soon as possible. If at any point, you need support from Esri, we are here to help you along the way.

Congratulations on taking the first steps to introducing maps and map-making tools to your school.

GIS is a real-world, problem-solving tool. GIS users outside of the educational setting—those in government, business, natural resources management, health care, and so on—employ this powerful technology for that very reason. It is, by far, the most versatile and effective problem-solving tool available. Whether the subject is science, math, or economics; whether the classroom is elementary, middle school, or high school—when students learn with GIS, they learn how to use technology effectively to holistically address questions and they are better prepared to meet the challenges of work and life in the twenty-first century.

Teacher Testimonials

"I would say by day 2 or 3, students are more than comfortable with at least knowing you add and search for layers to discover relevant data."

> Jason Smolinski Teacher of Geospatial Semester at Fairfax High School Fairfax County, VA

"The best way to teach the course is to not worry about knowing it all. Expect that you're always going to learn new things with the students every year."

> Katelyn Chadwick Teacher of Geospatial Semester at Freedom High School Loudoun County, VA

Check out these videos for more testimonials from teachers in the Geospatial Semester in Loudoun and Fairfax County, Virginia.

Jason Smolinski

Katelyn Chadwick

John Pruess & AJ Talboo

Why do you need this guide?



This guide provides the steps to help you successfully introduce and deploy mapping technology across your entire school. We'll walk you through how to set up your organization, and how to get your teachers and students ready to work with ArcGIS Online. For information on a training plan for teachers, please see the Implementation Guide for the Classroom.

If you have not yet explored ArcGIS
Online, you are encouraged to try a
lesson or two from the <u>Curriculum</u>
<u>Builder</u> that do not require an
account. This will give you an idea of
how ArcGIS Online can help your
teachers and students, and will get
you familiar with how an
organizational account works.

Who is this guide for?

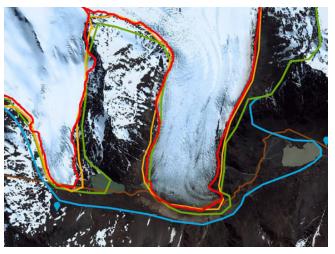
School Administrators and School Technology Contacts

It's a Web GIS world

Mapping and analytics connect everyone

GIS has the extraordinary potential to touch every web-connected being through a common visual language that unites people across organizations and throughout the world. Today, hundreds of thousands of organizations in virtually every field of human endeavor are using GIS to make maps that communicate, perform analysis, share information, and solve complex problems. This is literally changing the way the world works. The power of this shift in the ways that people think about maps and geographic data is evident in these compelling examples.





GIS maps are uniquely of the moment

Published moments ofter the event, this shakemap portrayed the extent of area and people affected by the devastating 2016 earthquake in central Italy.

GIS maps reveal rapid global change

If a picture tells a thousand words, a map tells a thousand pictures. This map starkly reveals the disheartening extent of glacier retreat in the Southern Hemisphere.

For more great examples of web maps and applications visit The ArcGIS Book.

Do you have to follow the guide completely to be successful?

Your deployment of ArcGIS Online will vary based on your goals for the semester. This guide outlines some of the best practices for implementing ArcGIS. However, you may have your own methods that work for you or that you are required to follow. Use the guidelines outlined in this guide when and where applicable, and supplement the guide with your own ideas as needed.

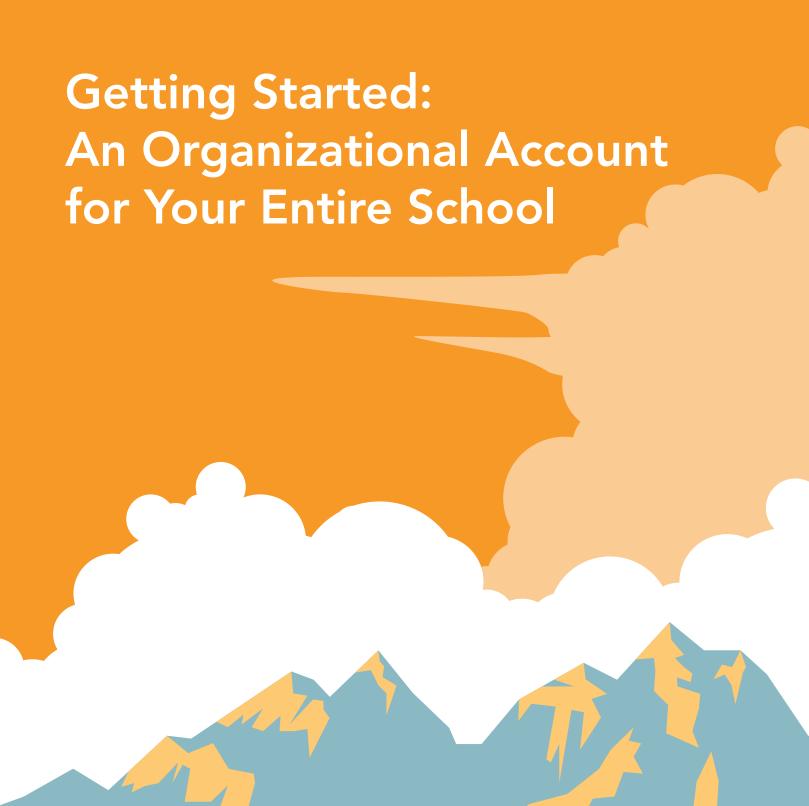


ROAD MAP

In the following pages you will find:

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Your ArcGIS Online Organization

ArcGIS Online is a formidable, yet easy-to-use tool that anyone can use to make maps and display data. However, its power expands exponentially when you combine that tool with membership in an ArcGIS Online organization account. An organization account enables you to save and share your work in many ways, and provides access to a multitude of additional mapping and analysis capabilities. Although there are a number of activities in this Implementation Guide that you can complete without being signed into an organization account, we recommend that you get one to experience the added difference it makes. You'll be glad you did!

If you do not have an organizational account already, there are two ways to obtain one.

• Join the Learn ArcGIS organization

The Learn ArcGIS organization is available for students, teachers, and others just getting started with ArcGIS. Follow this link to the <u>Learn ArcGIS organization</u> to activate a 60-day membership. With this membership, you can immediately begin to use maps, explore data resources, and publish geographic information to the web. Getting a Learn account is quick and easy way to experience web GIS but content is deleted after 60 days.

• Esri Schools mapping software bundle

The ArcGIS for Schools Bundle is available at no cost for instructional use to individual US K–12 classrooms, schools, libraries, and districts. Beyond the United States, the bundle is available to schools worldwide through Esri's network of international distributors. Every public, private, home school, and youth-service club is eligible. The software bundle includes the following:

- ArcGIS Online organizational and user accounts for teachers and students.
- Ready-to-use web and mobile apps.
- ArcGIS Community Analyst licenses.
- ArcGIS Desktop Advanced licenses.
- Option of 50, 500, 2000, or 10,000 named users (Class, School, District).

Sign up for your Schools Mapping Software Bundle

Set Up Your Organization

Congratulations on obtaining an ArcGIS Online organizational account for your students! Here are 3 things you'll need to decide when you first receive your organization, and begin to go through the set-up process:

• Pick a name for your Organizational Account

The Organization Name is what will appear in the banner on the home page and will also be in the URL for your ArcGIS Online website (org-name.maps. arcgis.com). It should be a clear and complete name since the home page can be public facing, and has the capability to display student and/or teacher work.

Pick a short name for your Organization

This is the way your organization will appear in the URL link to your home page. pay close attention to the warning associated with the input of the short name.

• Identify an administrative contact

Administrative Contacts are those individuals that Esri can notify with information about new updates to the system and who you've authorized to speak with customer service for any technical issues. The designated administrator will oversee the Organizational account. You may want to have your building IT person as another administrator in times where technical issues arise so they too can speak with customer service.

For questions about the Schools Mapping Software Bundle, contact <u>k12schools@esri.com</u>

For questions about ArcGIS software, visit Esri Technical Support

For questions about software orders, downloads, account and license management, contact <u>Esri Customer Support</u>

What is an organizational account?

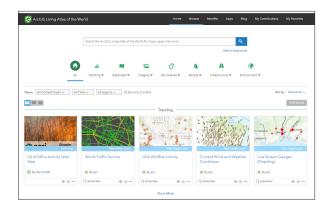
If you have not yet explored ArcGIS
Online, go to the <u>Implementation</u>
<u>Guide for Classrooms</u> and try the 3 Skill-Builders. Before getting into how to manage your organizational account, we'd recommend that you make some maps, find, display, and create data, get familiar with different symbols and smart mapping, and create some web apps.

It's also helpful to learn how ArcGIS users share maps and apps with others. As you begin to gather some content items in your account, it's a good time to become acquainted with how to manage things in the context of your classroom.

An ArcGIS Organization account consists of the following components:

 Home Page: Typically includes 8-12 premier items (maps and apps) that are most important for a visitor to discover and use, including a few apps showing curated content of different types. Create your item list so that the top items appear first.

- Gallery: includes a larger set of items (e.g. 100+ maps, apps, story maps, and data layers) that are categorized in meaningful ways that users can explore.
- Groups: As your item list grows, you can organize content into Groups. Each group can represent a specific thematic category or provide a way to share information with a specific team, workgroup, or community. For example, you can see the group implementation in the <u>Living Atlas</u>:



• **Users**: all of your students can be added to the account for you to share data, collaborate and create maps, and assess their work.

Set up the administrator's account

1. Creating the login

You may have already created a username when you first received the organization. If not, create a username that is unique to you and your school. Note the following:

If you ever delete the account, the username you created will not be able to be used again.

If your school and/or your district decide to use ArcGIS Online, there may be a need to create systematic usernames that may require you to receive a new username. No worries, though, you can transfer materials between accounts at any time.

2. Try a lesson using your new account

Students have access to a wide variety of data and mapping tools without ever signing into ArcGIS Online. However, to give you a sense of the breadth of analytical tools available with a login, try this lesson. This will help you decide when you want your students to have access to more tools through their own account.

If you determine that your students do not need accounts yet, you can proceed to Managing Content section.

3. Setting up groups

Groups can have huge benefits from a school administrator's perspective. Depending on the structure of the school and teacher teams, you may wish to set up groups for teachers to share work amongst each other. This could be done by subject area, grade levels, or by teacher teams. It is important to note that even though a teacher can share materials with other teachers in a group, the original item can only be edited by the owner until the user saves the work into their own account. The user can then edit the work.

It's also a good idea that when you enroll students into the organization, that you first set up groups for each grade level or class. The most common way of setting up groups is by graduation year. This allows for an easier way to delete accounts, and materials associated with those accounts, once those students have left the school.

Whether you choose to create a group for a set of teachers (e.g., by subject area) or if you are creating student groups (by grade level/graduation year), all the individuals you will enroll can be automatically added to the group when you create their accounts. This will be the easiest option to add individuals to a group and will save you time later. You can add individuals to a group after accounts have been created by either searching for and adding individuals manually or by creating a unique tag that individuals can search for and request to be added to the group. In the case of the latter, you will need to accept each of the individual's requests.

If you wish to give teachers instructions on how to create groups for their individual classes, please direct them to the <u>Org Management for Teachers Guide</u>.

Personally Identifiable Information

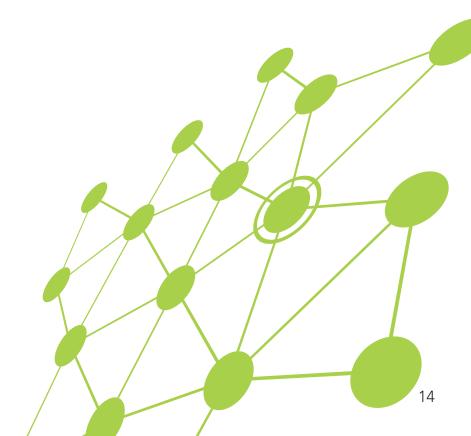
It is strongly recommended to minimize the sharing of student's personally identifiable information (PII). You can avoid issues (legal or otherwise) with sharing student information with the following considerations:

• Use a generic admin email when creating logins

An email is required when creating accounts for your students, so you will want to use either the teacher's email address or a generic admin email account. If one of your students forgets their password, this will allow you to reset it for them. If you decide to use your teacher email and you are creating batch accounts, we recommend you select the 'do not send notification email' option to avoid being overwhelmed with notifications.

Create anonymous logins

Use a combination of sequential numbers, school, or class name for each account to generate the most unique usernames possible. See <u>Bulk Creating Student Accounts</u> for more guidance on creating anonymous student accounts.



Create Groups

- 1. Sign in to ArcGIS Online and click on the Groups tab.
- 2. Click on Create New Group.
- 3. Name your group and provide a description.

The description is optional and more for your reference to keep track of the purpose of the group.

4. Create a tag.

A tag in ArcGIS Online is a searchable "keyword or phrase" that is like a Twitter hashtag without the actual hashtag symbol. You will want to make the tag unique to the group so students and colleagues can search as needed for the group.

5. Answer the following questions pertaining to the access you will allow to the group:

- Who can view this group?
 - Only group members only if you want all content to stay within this group and not be seen by anyone else
 - People in the organization this allows everyone who has a login to the school's organization to potentially view the contents of the group.
 - Everyone (public) this is useful if you want anyone without a login to be able to view the contents of the folder.
- Who can join this group?
 - Your answer here is based on the way in which you intend to enroll teachers in the group. Note: If you select Anyone, this gives access to anyone who may stumble upon the group in the public to potentially join the group.
- Who can contribute to the group?
 - Your answer here is dependent on whether teachers will be contributing to the group, or if you as the administrator are using this group for content delivery only.
- What items in the group can its members update?
 - You may allow members to edit other members content (may be good for group projects), however, most choose to allow teachers to only edit their own items.
- 6. Choose the way the content is sorted and displayed in the group.
- 7. Click "Create Group"

Search for and add teachers to the group

1. On the group page, click the Invite Member's button in the top right corner.

If the teachers you are adding have an account in the school administrator's organization, keep the box checked for "only search for members in <your organization>". If teachers have an account in another organization in your district or elsewhere, uncheck this box

- 2. Type in the teacher username in the search box. A successful search will yield results in the left panel of the dialog box.
- 3. Click once on the user's name, the user will appear on the right side of the dialog box under Invitation List
- 4. If you want the users to be added automatically to the group, you must check the box at the bottom of the form. Otherwise, the user must choose to accept an invitation to join the group.

Create Student and Teacher Accounts

There are three options available for creating student and teacher accounts:

- 1. If you wish to create accounts for your students in bulk (easiest way to enroll all students in the school), first download the <u>ArcGIS Online Login Template</u>. This excel spreadsheet will allow you to bulk upload your students 200 at a time and will minimize data entry errors associated with account creation. Then go to <u>Batch Create Student and Teacher Accounts</u>. You can use this option for teachers as well. However, it is likely the template will require additional time to complete (adding teacher names and emails, which may make it easier and take less time than using option 2.
- 2. If you wish to create accounts individually, see <u>Creating Individual Accounts</u>.
- 3. There is an option to "Invite members to join using an account of their choice". This sends an invitation to the user to join the organization using any email address, username and password they would like. **This is not recommended** for the purposes of protecting personally identifiable information. Use a generic school admin account and select the 'do not send a notification email' option to avoid getting dozens of notification emails.



Create Accounts in Bulk

Creating accounts in bulk can be a quick and easy way to manage the student's access to ArcGIS Online. This section focuses mainly on student accounts, but includes tips for teachers as well. The first step is populating the ArcGIS Login Excel Template. If you do not have excel, or the excel spreadsheet is not compatible with the spreadsheet program you are running, use the column headers explained below

Explanation of Fields

Email – Esri requires that all users have a valid email address. The main purpose of the email address is for instances when a password needs to be reset. Use either your email address OR use a generic admin email address.

First Name/Last Name – please refer to your school/district policies regarding the sharing of student personal information. You can share student work within ArcGIS Online with the public, which in most cases does not allow you to share student's first and last names with the public.

Tip: An example of alternative first and last name combinations is to use an abbreviated code for the school as the first name and a student ID number as the last name. In the case of Alpha Beta School and a student ID of 999999, the first name could be ABS, last name 9999999.

Username – create a username that is unique to the school, student, district, etc. Consider the following:

- If the account is ever deleted, the username you created will not be able to be used again.
- If it is a simple or common username, a given username may already be in use in the ESRI network. In this case, the system automatically attaches a number to the end of the username based on the number of times that username has been used.
- It may be a good idea to use underscore (_) to separate items in the username to avoid duplicates in the network.
- For easier account management from year to year, consider adding in the current school year (18 = 2018) or the student's year of graduation. See Admin Tools for ArcGIS Online for how you can search for and bulk delete accounts after the school year is over.

Password – the password you assign to all students is temporary and is only used to login for the first time. The students will then be prompted to change their password. Example of a password may be gis123456. Note: For elementary students, consider having ALL students in your class set the same password. This eliminates the possibility of students forgetting the password they set and you as the teacher having to constantly reset passwords.

Role – there are 4 roles that can be assigned to any member of the organization.

For this column, you must type out the name of the role and have the correct spelling.

The roles are as follows:

- Viewer: This level of user can only view and explore the maps and data in the organization.
 They cannot create content.
- User: This level is able to create maps and content and share the content, but they cannot do any analysis on the data.
- Publisher: This level is able to create, analyze, manipulate, and share maps and data. This is the recommended level for students and teachers.
- Administrator: This is for those that will manage the user accounts and content. These are the only individuals who can add or delete users from the organization.

Level – There are two levels of engagement for your members, Level 1 and Level 2. When entering the level into the column on the spreadsheet, use only a single digit 1 or 2.

- Level 1 member: Can view content, but cannot create, own, or share content
- Level 2 member: Can view, create, and share content. This is the most common level for students and teachers.

ESRI Access – by checking this box, you allow the user to login to ESRI's website. Students do not need access to ESRI, unless you would like them to be able to access training classes, videos, and modules.



Add or Invite a batch of members in 5 steps:

Step1: Once you have filled out the <u>ArcGIS Online Login</u> <u>Template</u> with the users you want to enroll, save the spreadsheet as a .csv file (comma delimited).

Step 2: In the Organization page, click the Invite Members button.

Step3: In Step 1, you will be asked which way you would like to invite members. For bulk upload, select "Add members without sending invitations".

Step 4: In Step 2, click on the "From a File" tab. Browse for the CSV file you just created. Once selected, click the "Upload File and Review" button.

Step 5: In Step 3, you will be asked to verify the information is correct for all members you are trying to add. If you would like to add these individuals to a group, click the "Specify Groups" button, and select the appropriate group. Note: groups must be created first before you enroll students into a group. See Setting Up Groups for directions on how to create groups. When finished verifying the information and selecting a group, click the "Add Members" button.

Creating Individual Accounts

If you are creating a small number of student or teacher accounts, or you prefer to create each account one-by-one, begin by clicking the "Invite Members" button while in the Organization tab.

In Step 1, you will be asked which way you would like to invite members. For creating individual accounts where no email is sent to create the account, select "Add members without sending invitations". If students have an email address, and you would like them to receive an invitation to join the organization through email, select "Add Members and Notify Them Via Email"

In Step 2, regardless of the option you choose in Step 1, the default should be to choose the "One At a Time" tab. Complete each field in the form. Once selected, click the "Upload File and Review" button.

After completing the first individual user, you may add more by clicking the "Add Another" button.

In Step 3, you will be asked to verify that the information is correct for all members you are trying to add. If you would like to add these individuals to a group, click the "Specify Groups" button, and select the appropriate group. Note: groups must be created first before you enroll students into the group. See <u>Create Groups</u> for directions on how to create groups. When finished verifying the information and selecting a group, click the "Add Members" button.

For an explanation of the account fields, refer to Explanation of Fields.

Managing Licenses for Your Organization

With every ArcGIS Online Organizational account, users have access to ESRI's ArcGIS Pro and many other useful products. To access certain ArcGIS tools and products, you as the administrator need to assign a license to the user. A description of these additional products can be found here.

1. To issue a license for these products, under the Organization tab, click on Manage Licenses.

You will see a list of products across the top with the number of licenses available and how many are still available (have not been assigned to a user). These products are associated with ArcGIS Pro, as indicated by the ArcGIS Pro tab being highlighted above the list of products. If you select the Additional Products tab, you will see a list of products that are available within ArcGIS Online.

2. Below the list of products, you will see a list of users in the organization. To assign a license or set of licenses to All members, simply use the Select All link and select the license or licenses you would like to assign. For assigning licenses to individual users, use the Configure licenses link next to the individual member's name.

Managing Content Within the Organization

When content is created by a user, the content item is stored within the Content tab in ArcGIS Online. To help organize of the content, the user can create folders in which to place content items with a common purpose. The folders appear along the left side of the Content tab. Note that when a user is given a license for some apps, like Community Analyst, the app will create its own set of folders for which to store content created within the app. When saving content, the user can select where the content is to be stored.

As content is created, it is assigned a type based on how the content was produced. For example, when a map is created and saved, it appears in the content as a Web Map.

A feature layer is a thematic collection of similar geographic features - for example, buildings, parcels, cities, roads, and earthquake epicenters are examples of feature layers. When a Feature Layer is created, a Service Definition layer is also created. The Service Definition layer holds

the properties for feature layers—such as style, transparency, visible range, refresh interval, and labels—that control how the layer appears in the map. Using a feature layer, you can view, edit, analyze, and execute queries against features and their attributes. Therefore, both items need to remain together in your content. If you delete the Service Definition file and try to use the Feature Layer, the Feature Layer will not draw.

For frequently used layers, you can click on the star to the right of the items' name, and the item will appear under the My Favorites tab.

Use of Credits

For most institutions beyond schools, ArcGIS Online is a paid subscription service. Esri assigns each organization a set of "credits" that act as currency based on the use of some apps, analytical functions, and data storage that require services hosted in the cloud. As users run processes or as data is stored in the system, credits are used. For education, Esri makes these credits free. However, schools are asked to be mindful of the credits being consumed, and an Esri Customer Service Representative will instruct on the use of credits as needed.

For a more in-depth description of the use of credits and credit usage by transaction, go to <u>Understanding Credits</u>.



Featured Content

As administrator of the organization, you can choose to display teacher or student work on the home page of your organization. As a public-facing site, this could be a great way to show student work to the community. A specific group is used to access featured content for display. You must first create a group to populate with work. To access the feature content options:

- 1. In the Organization tab, select Edit Settings
- 2. Click on the Home Page tab
- 3. Choose the group you would like displayed

Gallery

Another way to show off student work is by using a gallery. As with the Featured Content on the Home Page, a gallery pulls work from a group. You can set up a group specifically for adding content that you want featured in the gallery, or you can point the gallery to a group that already exists. A gallery is a great way to feature the work for your class after they finish a project, as well as to rotate the group featured in the gallery among different classes.

Tip: Think of the Featured Content as a sample of all the work being done in your school, and the Gallery as a way to feature all students in a class, subject, or grade level.

Admin Tools for ArcGIS Online

ESRI has partnered with GeoJobe to offer an app that you can add to your ArcGIS Online Organization called Admin Tools for ArcGIS Online. You can find this tool by either going to this website (http://www.geo-jobe.com/admin-tools/) or by clicking on the waffle (series of 9 dots located at the top of the ArcGIS Online website next to your username) and navigating to the Marketplace.

Admin Tools give you the ability to "clean out" your organization at the end of the school year by batch deleting content and accounts, removing or clearing groups, or simply changing the tag on groups of content at one time.



Frequently Asked Questions

Q: The student has forgotten their password. How do I change the email address and reset the account password?

A: In the Organization tab, find the student who needs their account password reset. Click once on the name and select Profile. Click the Edit Profile button and enter the desired email address. Save the profile and return to the Organization. Search for the student, then under Action, drop down the list and select Reset Password.

Q: What apps come with the Education Bundle?

A: Refer to the School's Bundle webpage for a description of all products included.

Q: How is ArcGIS Pro different from ArcGIS Online?

A: ArcGIS Pro is a more robust desktop GIS application from Esri. With ArcGIS Pro, you can visualize, edit, and analyze your geographic data in both 2D and 3D. You also have access to a much bigger toolbox for a wide range of advanced analyses and personal or team oriented GIS projects.

Q: I only requested 50 users for my Organization. Can I add more later if our program grows?

A: No problem. Contact <u>Esri Customer Support</u> and request more named users.

https://learn.arcgis.com/en/educators/

