

USER TECHNICAL REQUIREMENTS (Rev 02-20-2020)

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Overview

Apex Learning offers a suite of project-based Technology Courses spanning coding, animation, and design. These courses let students move beyond being users of technology to become creators. In today's world, the technical, creative, and problem-solving skills students develop in Technology Courses open the door to a more empowered, impactful life whether they enter technical careers or not.

Technology Courses are for districts that want to expand opportunity for middle and high school students to access innovative and relevant project-based Technology Courses.

Highlights:

- Project-based courses. Students complete projects such as building an app, creating 3D games, producing animated shorts, or designing a fashion collection giving then hands-on experiences as creators with technology.
- **Industry-standard tools.** Students use the same industry-standard tools as the best professionals, gaining marketable skills and experiences.
- **Support from experts.** Recognizing that many teachers may not be familiar with the professional tools necessary to offer these courses, we're including full support from experts. If students or teachers need any help with the course or projects, they can email, chat, or call to get assistance.

Every student deserves the chance to take courses like these. The technology and thinking skills they help develop are indispensable to navigating the present, shaping the future, and opening the door to careers in creative and technology fields and beyond. With the support our experts offer, every school can feel comfortable offering Technology Courses to their students...no matter what technical expertise their own staff may have.

Catalog

The following titles make up the Technology Courses bundle. Technology Courses descriptions can be accessed below through the linked course titles in the chart below.

Coding	Animation	Design
Mod Design 2 3D Game Development App Design Mod Design 1 Mod Design 1: Dimensions Expansion Course Adventure Maps Expansion Course Server Design	3D Animation 3D Character Animation	3D Game Design 3D Printing & Modeling Fashion Design

FAQs

Who should take Technology Courses?

All middle school and high school students are good candidates for Technology Courses. To prepare students for a world where technological literacy is as important as reading, writing, and arithmetic, all students deserve equity of access to these courses. The technology skills they develop are essential to navigating the present and shaping the future, and they empower students by enabling them to become creators with technology, not just users. Technology Courses prepare students with critical thinking, problem solving, and creativity skills that prepare them for their futures, whether in technology fields or not

What if we don't have teachers with the technological expertise to help students?

Not to worry; district staff doesn't need any technical expertise to offer the Technology Courses. For students taking our Technology Courses, experts are available by email, phone, and chat if they need help with their projects or any course material.

In each Technology Course, there are two teacher-scored checkpoints and a final project. Teachers are provided clear grading rubrics that any teacher can follow, even if they have no familiarity with the subject-matter or the tools students use. If they need additional help grading, our Support experts can provide that guidance. The troubleshooting activities are self-graded by the student with the score entered into the system by the teacher.

Local teachers will be supported by our support team, internal Success Management team, and by the technology specialists on our staff who can aid with teacher and student questions about their technology projects.

What do I need to know before enrolling students in Technology Courses?

Technology Courses are designed to be valuable for students in middle or high school. To use them, it's important to know that:

- They require either a PC or a Mac (no tablets, no Chromebooks).
- If possible, it's a good practice for students to complete all their work on the same computer since some of the Technology Courses use static file paths in the software.
- Storing project files using the application version of Google Drive or OneDrive, or even in a
 network storage location, is a valid implementation option for most of our Tech Courses if your
 district is already using a similar method to save student work.
- If multiple students work on the same computer, and project files are being stored locally, it's best if they have separate logins to the computer to keep their projects separate.
- Because of licensing agreements for Fusion and Minecraft, best practice should be that subsequent students using a subscription for App Design, Server Design, or Adventure Maps that was previous used for the same course should complete their work on the same computer as Student 1 (as Fusion/Minecraft from the subscription is loaded on that device/machine).
- The Technology Courses bundle is sold/priced separately from other Apex offerings.

See the <u>System Recommendations</u> for additional technical requirements..



What comes included? Do I need to buy anything else?

Technology Courses include the complete curriculum, along with expert support to ensure students have the help they need with their projects and coursework. Technology Courses come with all the software needed to complete the coursework.

In each Technology Course, students receive direct instruction through fun, application-oriented videos. Students complete a short quiz after every lesson, complete several hands-on assignments, and create a large project that they work on throughout the course. The hands-on assignments are completed inside the course software. For some of our Technology Courses, when students complete a hands-on assignment correctly, they unlock a code that allows them to earn full points for that assignment. Other Tech Courses need the assignment reviewed and graded manually by the teacher.

Can I see more about the technical details of these Technology Courses?

Yes, technical requirements are included in our <u>System Recommendations</u>, beginning on page 4. Each Technology Course also comes with an Installation Guide (linked to in the System Recommendations) that provides additional technical details, gives district access to the required software, and shares best practices for implementing Technology Courses from a technical perspective. Contact Apex Learning <u>Support</u> with any questions.

How are grades awarded? How many credits is each technology course worth? What kind of credit should a district offer?

Students will earn a letter grade in the course, determined by the local teacher, based on their performance on the quizzes, assignments, and final project. Grading decisions regarding whether to award a letter grade or a pass/fail grade is up to the district. As always, it's up to districts to determine what kind of credit to offer, how many credits a course should be worth, and how it should display on a student's transcript.

Each Technology Course is designed to cover a single-semester of content. Each lesson is expected to take about 80 minutes; there are roughly 45-50 lessons per course for a total of about 60-70 hours per course. Expansion courses are 5 units in length (vs. 13 units in most courses), so of a shorter duration.

Are there recommended grade levels for any course?

The Technology Courses are designed for middle and high school students.

The readability of the courses is accessible for most students. The primary source of instruction is through video, and written instructions are provided in easy-to-read language. In addition, text-to-speech and translation are available for all text elements.

Are there prerequisites for any of the courses? Does a student have to take Mod Design 1 before taking Mod Design 2?

Mod Design 1 is a prerequisite for the Mod Design 1: Dimensions expansion course as students build upon the concepts covered in Mod Design 1 using a new Dimensions project. At the end of the expansion course, students also have the option to merge their Dimensions project with their Mod Design 1 project.

Mod Design 1 was built for more of a middle school audience than Mod Design 2, but they are not sequential courses.



Do we need to teach specific programming languages/programs?

No, each Technology Course teaches students how to use the programs needed and guides the student through completing their project. Students are fully supported with instruction on the coding and tools being used to complete the project. No additional instruction is required.

If a student has trouble/questions, he can contact our technology course experts for assistance via Support.

What happens if the laptop or computer the student is using breaks? What happens to the project? Is it backed up somewhere?

Students create backups along the way in the program. Project milestones can be provided in case of a lost project. This will allow students to pick up at the nearest unit with a generic project (without customizations they may have made).





System Recommendations Network & Hardware Configuration

This document describes the network and hardware configurations recommended or needed to work with Apex Learning solutions based on the solution and the device being used. Apex Learning solutions include:

- Comprehensive Courses
- Tutorials

- Apex Learning Virtual School (ALVS)
- AP* Exam Review (APER)

Network Configuration

Bandwidth

A suitable Internet connection is required. This connection must have appropriate bandwidth considering:

- The number of concurrent users
- Other network applications (e.g. VOIP)
- Current bandwidth utilization
- Varying usage habits

Access

Firewalls, content filters, and other network infrastructure must allow connections to the following ports and domains:

- *.apexlearning.com
- *.apexvs.com
- correlation.edgate.com

- Port TCP/80 (all listed domains)
- Port TCP/443 (all listed domains)
- A defined set of 3rd party URLs (provided upon request to Support)

HTTP 1.1 Support

Apex Learning supports HTTP 1.1 (RFC 2616). This protocol is optional, but recommended.

Proxies sending HTTP 1.1 requests must be either compliant or conditionally compliant with RFC 2616. If a non-compliant proxy cannot be made compliant, then connections to Apex Learning courses must either:

Bypass the proxy

Use only the HTTP 1.0 protocol

HTTPS Support

Apex Learning supports HTTPS (Hypertext Transfer Protocol Secure) to provide encrypted communication and secure identification.

Content Caching

Cache Setting	Comprehensive Courses, ALVS, APER	Tutorials
Domains that may be cached, but should be refreshed weekly	media.apexlearning.comassets.apexlearning.comacecontent.apexlearning.com	Not applicable
Domains that must NOT be cached	apexvs.comcourses.apexlearning.comcourse.apexlearning.comcourse-api.apexlearning.com	apexvs.com tutorials2.apexvs.com

Hardware Configuration

Desktop Operating System

To ensure appropriate security and support Apex Learning aligns supported operating systems to manufacturer support timelines. If an OS is no longer supported by the manufacturer or has not had a security update for a year or more, Apex Learning will not officially support.

Operating System	Comprehensive Courses, ALVS, APER	Tutorials
Microsoft Windows 8.1	Supported	Supported
Microsoft Windows 10	Supported	Supported
Apple Mac OS X 10.12 (Sierra)	Supported	Supported
Apple Mac OS X 10.13 (High Sierra)	Supported	Supported
Apple Mac OS X 10.14 (Mojave)	Supported	Supported
Chrome OS	Supported	Supported

Web Browser

Modern web browsers update automatically to ensure up to date security. Apex Learning strongly suggests taking advantage of this feature or periodically updating to the most recent browser. If a browser has not received an update for a year or more, Apex Learning will not officially support.

Web Browser	Current supported versions (7/2018)	Comprehensive Courses, ALVS, APER	Tutorials
Microsoft Internet Explorer	11	Supported	Supported
Microsoft Edge	44 and above	Supported	Supported
Google Chrome	69 and above	Supported	Supported
Mozilla Firefox	62 and above	Supported	Supported
Apple Safari	12.1 and above	Supported	Supported

Tablet Device Operating System

The following operating systems are supported on tablet devices using native browsers only. To ensure appropriate security and support Apex Learning aligns supported operating systems to manufacturer support timelines. If an OS is no longer supported by the manufacturer or has not had a security update for a year or more, Apex Learning will not officially support.

Operating System	Comprehensive Courses, ALVS, APER	Tutorials
iOS 9 or higher	Not supported	Supported
Android 6 (Marshmallow) or higher	Not supported	Supported
Microsoft Windows 8.1	Supported	Supported
Chrome OS	Supported	Supported

Additional Recommendations and Requirements

Requirement	Comprehensive Courses, ALVS, APER	Tutorials
Display Resolution & Color Depth	Resolution • 960 x 768 minimum • 1024 x 768 recommended min Color Depth • 16 bits (Highcolor) recommended	Resolution • 960 x 768 minimum • 1024 x 768 recommended min Color Depth • 16 bits (Highcolor) recommended
Required Browser Plug-ins	Adobe ReaderLegacy courses only: Adobe Flash Player 30 or higher	Not applicable
Audio	 Speakers or headphones Microphone (World languages only) Audio recording support (World languages only) 	Speakers or headphones
Print (as appropriate)	PrinterScannerFaxMultipage TIF Viewer	Printer
Word Processing	Software that can open, modify, and save documents in Rich Text Format (RTF)	Not applicable

Technology Courses

The following requirements outline the minimal requirements to use Technology Courses. The table that follows provides more information and additional requirements by course title.

Minimal Requirements

Hardware requirements

- PC or Mac (not tablet or Chromebook)
- Windows 10, 8, or 7, or Vista, or Mac OS10.8 or higher, 64-bit (after 2008)
- CPU Intel® Pentium® CPU N3530 (or better)
- CPU: SSE2 instruction set support
- 4 GBs RAM
- 7 GBs free disk space

Graphics requirements

- GPU: (Integrated) Intel HD Graphics (Bay Trail) or Radeon HD 6230 (or better)
- GPU: (Discrete) GeForce 710 or Radeon HD 6450 (or better)
- Graphics card must have OpenGL 3.2 compatible graphics with 1 GB RAM
- Monitor that allows for at least a 1280 x 768 resolution

Network requirements

At least 1mbps

Other

- Headphones
- · Mouse with scroll wheel
- Students need access to email to send project files to their teacher and to Apex support.
- Because students must access their saved project files from one session to the next, students need:
 - Access to the same computer each session
 - Ability to save and access saved files on the desktop

Course-Specific Requirements

This table provides an overview of additional requirements for each course. For specifics, please see the Installation Guides.

Title (links to syllabus)	Student Project	Tools	Software Access	Additional Requirements
3D Animation	Create a 3D movie	Blender®		See <u>Installation Guide</u>
3D Character Animation	Create a Minecraft® animated short movie	Blender®		See Installation Guide Systems should meet minimum hardware requirements of Minecraft found here: https://help.mojang.com/customer/en/portal/articles/325948-minecraft-java-edition-system-requirements Latest version of Java installed
3D Game Design	Create a basic 3D video game	OWL Game Creator		See Installation Guide Note: This course has stricter OS requirements than general requirements Windows Vista not applicable MAC OS 10.9 or above
Mod Design 2	Create an advanced Minecraft® mod using Java™	Eclipse™, GIMP, Tabula	Access to Minecraft (Java edition) is not required therefore not provided by Apex.	See Installation Guide Systems should meet minimum hardware requirements of Minecraft found here: https://help.mojang.com/customer/en/portal/articles/325948-minecraft-java-edition-system-requirements Latest version of Java installed

Title (links to syllabus)	Student Project	Tools	Software Access	Additional Requirements
3D Game Development	Design a custom video game using C#	Unity®		See Installation Guide Graphics card must have dX10 (shader model 4.0) capabilities (note: most cards produced after 2007 meet this requirement)
3D Printing & Modeling	Design 3D models suitable for printing	Blender®		See <u>Installation Guide</u>
App Design	Create a downloadable app for iOS or Android	Clickteam Fusion 2.5	Fusion 2.5 is required. Licenses will be provided based on enrollment in the course but limited by overall seats purchased.	See Installation Guide Older graphics cards may be used for this course. Contact Apex Learning Support to gain access to needed licenses
<u>Fashion</u> <u>Design</u>	Design a fashion collection	Inkscape™		See <u>Installation Guide</u> Older graphics cards may be used for this course.
Mod Design 1	Create a Minecraft® mod using Java™	Eclipse™, GIMP	Access to Minecraft (Java edition) is not required therefore not provided by Apex.	See Installation Guide Systems should meet minimum hardware requirements of Minecraft found here: https://help.mojang.com/customer/en/portal/articles/325948-minecraft-java-edition-system-requirements Latest version of Java installed MAC students may need a legacy version of Java installed which can be found here: http://support.apple.com/kb/DL1572
Mod Design 1 Dimensions	Create a Minecraft® dimension using Java™	Eclipse™, GIMP	Access to Minecraft (Java edition) is not required therefore not provided by Apex.	See Installation Guide Systems should meet minimum hardware requirements of Minecraft found here: https://help.mojang.com/customer/en/portal/articles/325948-minecraft-java-edition-system-requirements Latest version of Java installed MAC students may need a legacy version of Java installed which can be found here: http://support.apple.com/kb/DL1572
Adventure Maps	Design a Minecraft® world using command block programming	Minecraft® (Java edition)	Minecraft (Java edition) is required. Licenses will be provided based on enrollment in the course but limited by overall seats purchased.	See Installation Guide Systems should meet minimum hardware requirements of Minecraft found here: https://help.mojang.com/customer/en/portal/articles/325948-minecraft-java-edition-system-requirements Latest version of Java installed Contact Apex Learning Support to gain access to needed licenses
Server Design	Code a custom Minecraft® multiplayer server	Eclipse™, Minecraft® (Java edition)	Minecraft (Java edition) is required. Licenses will be provided based on enrollment in the course but limited by overall seats purchased.	See Installation Guide Systems should meet minimum hardware requirements of Minecraft found here: https://help.mojang.com/customer/en/portal/articles/325948-minecraft-java-edition-system-requirements Latest version of Java Must allow access to private network for local servers Contact Apex Learning Support to gain access to needed licenses

Apex Learning Technology Courses are not official Minecraft® products. They are not approved by or associated with Mojang®. They are not sponsored by or affiliated with Unity Technologies. Unity® is a registered trademark of Unity Technologies.

Getting Support

For additional help with network or hardware configuration, please contact Apex Learning Support.

- Monday Friday, 5:00 AM 7:00 PM Pacific Time
- 1-800-453-1454 option 2
- support@apexlearning.com

Getting Started Guide Student: Technology Courses

Welcome! This guide will help you get started with Apex Learning® Technology courses.

Coding	Animation	Design
 Mod Design 2 3D Game Development App Design Mod Design 1 Server Design Mod Design 1 : Dimensions Adventure Maps 	3D Animation3D Character Animation	 3D Game Design 3D Printing & Modeling Fashion Design

Getting Started Checklist

- ☐ Gather everything you need to succeed in class.
 - ☐ Computer with internet access that meets Technology Courses System Requirements¹
 - ☐ Headphones and mouse with scroll wheel
- ☐ Sign in, reset your password, and set up security questions.
- ☐ Launch the course window by selecting a course title from the My Dashboard screen.

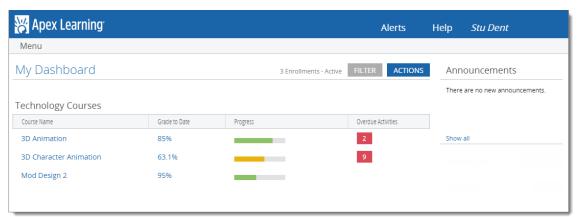
Support

- Online Help is available 24/7 by signing in to Apex Learning and selecting Help.
- Contact the Apex Learning Support team for installation questions, help with software, and assistance with your project by emailing support@apexlearning.com or visiting Help > Contact Support > Support for Technology Courses.

My Dashboard

Your school will provide your username, password, and the correct URL – most students sign in at www.apexvs.com. For security reasons, Apex Learning Support does not distribute sign in information.

After signing in, you are taken to My Dashboard where you can access courses, view progress information, and see announcements posted by your teachers.



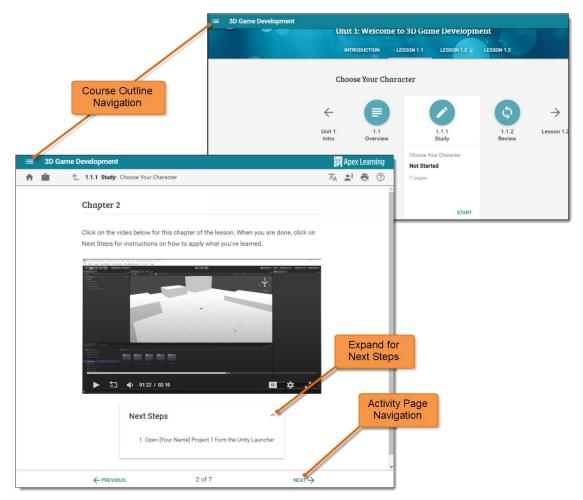
¹ http://cdn.apexlearning.com/documents/systemrecommendations.pdf

The Course Window and Downloading Course Software

Most of your time will be spent working between the course window and the course software applications.



Your school may have downloaded the course software onto your computer. If not, follow the instructions to download and install the software on the Unit 1 Overview page.



How to Submit Your Work

Quizzes are computer-scored and completed online in the course window. Most Practices and all Projects are teacher-scored – you might show your work in person or email your files.

Thank you for taking the time to become familiar with Apex Learning. We look forward to helping you meet and exceed your academic goals!



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Users intending to enroll in Online Courses delivered through Greenways Academy, should adhere to the following for computer compatibility.

INTERNET ACCESS:

• High Speed Internet Connection: WiFi, DSL *or* Cable. Recommended 40-128 Kbps per simultaneous workstation.

DEVICES:

- ** When offered, use the device compatibility program offered by the courseware to check if your device will work successfully with the courseware system. **
 - Desktop or laptop, notebook computers Supported. Running currently supported versions of Windows or Apple OS operating system.
 - Note: "Intro to iOS Mobile App Development" requires a computer with a Mac Operating System.
 - Chromebook
 - Tablets Supported. Running Android or iOS operating systems.
 - Smart Phones Limited support. Limited functionality on most courseware systems.
 - System time on computer is accurate and has correct Hour Day Date Month Year Time Zone and Daylight Savings Time offset (if applicable)
 - Computer has a sound card and speakers
 - For students enrolling in Rosetta Stone World Languages, a USB headset with microphone is required.

WEB BROWSERS:

Use the latest version of the browsers listed below:

- Edge
- Internet Explorer
- Chrome
- Firefox
- Safari
- Puffin (may be required for iPads in order to work with some courseware)
- * Browsers must be set to allow cookies.
- Pop-up blockers must be disabled.
- * Certain service-branded browsers (such as the AOL Explorer browser) are known to be incompatible with our courseware systems and should not be used to access Greenways Academy courses.
- * Certain browser add-ons (such as extra toolbars provided by MSN, Yahoo, Alexa, eBay, FunWebProducts MyWebSearch, HotBar, etc.) and various adware/spyware/malware programs on your computer can result in page-display issues. Greenways Academy staff cannot troubleshoot these issues.



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The courseware systems require specific plugins or addons in the browser. We strongly recommend that you have the following **free** browser plug-ins and media players installed: (some of the following are **required** to properly display certain content in certain courses)

Adobe Acrobat Reader: http://www.adobe.com/products/acrobat/readstep2.html

Flash Player: https://get.adobe.com/flashplayer/
 Java: https://java.com/en/download/
 Shockwave: https://get.adobe.com/shockwave/

* Plato Xtras: ftp://ftp.plato.com/public/plugins/Shockwave Xtras.zip

* QuickTime: https://www.apple.com/quicktime/download/

SUPPORTING PROGRAMS:

Some of the courseware systems expect the student to have additional software programs loaded on their computer. These programs are identified in the course syllabus.

Most all courses require the following software:

* Microsoft Office-Compatible Software

Notes on Third-Party Content:

- Educational partners, to which students of certain online course may be required to go, may have similar, or other requirements, and care should be given to fully read and understand those requirements as defined on those websites.
- Users should understand also that if technical difficulties are experienced at those websites, then
 requests for technical support must be addressed to the tech support staff of those respective
 companies, as Greenways Academy tech support staff cannot troubleshoot problems at websites
 which are not its own.
- Certain courses may require the user to have a program which is not provided as part of the course
 materials. Those programs will be listed in the course syllabus. Users should observe these
 requirements before enrolling in the course.

Tech Skills Needed:

- Each user should have a familiarity with the basic operation of a computer. The user should know how to turn on a computer, enter a name and password, use a mouse to access programs and use a keyboard to enter text and numbers to answer quiz and final test questions.
- Each user should be able to connect an external microphone and set up the microphone for recording



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If you are working on a Chromebook and a website isn't working, you might need to change your settings to allow Flash. Refer to the following website:

https://support.google.com/chrome/answer/6258784?co=GENIE.Platform%3DDesktop&hl=en

- To the left of the web address, click Lock $\stackrel{\triangle}{=}$ or Info $\stackrel{\bigcirc}{=}$.
- At the bottom, click Site Settings.
- In the new tab, to the right of "Flash," click the Down arrow Allow.
- Go back to the site and reload the page.

The software uses pop-up windows for various functions. To use the system and run lessons properly you must disable your pop-up blocker(s) or allow pop-ups from the site of the courseware provider (Edmentum, Rosetta Stone, etc.)

With pop-up blockers enabled you may experience several issues. Some of the most common are listed below:

- Offline Activities do not display
- Reading passages do not appear when the Show Reading Passage button is clicked
- You experience "The webpage you are viewing is trying to close the window" message.
- You experience "Please turn off pop-up blocker for this site permanently" message
- You cannot login when entering correct credentials
- Progress does not get recorded / updated when learners exit a lesson or test
- Assessment passages do not show up
- Unable to launch lesson; "Please wait...Click here when your lesson or test is complete

Resolution:

Below are links to instructions on how to disable common pop-up blockers:

Microsoft Edge
Internet Explorer pop-up blocker
Safari and Firefox on Mac Pop-up Blocker
Firefox pop-up blocker
Google Chrome pop-up blocker

Google Toolbar pop up blocker

Education City Issues Related to Flash

- Adobe will discontinue support for Flash on December 31, 2020. Education City is converting their software to HTML, however until that transition is complete, you may still need an alternate solution.
- We recommend you have the latest version of Adobe Flash Player installed (or a mobile Flash browser such as Puffin Academy if accessing content without the licon via a tablet device). Click Here for more information on how to install Puffin Academy and use EducationCity on it.



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Technical Assistance:

- If a student experiences an operational problem, the student has the option of contacting the teacher, calling the toll-free operations hot line or contacting the school.
- For issues where a link does not work, there is a button inside the course to report these malfunctions.
- Any of these problems will be resolved within a normal work day and not to exceed 24 hours