CodeHS

# Hour of Code: Teacher Guide

## Before the Hour of Code:

- Make sure student computers have an up-to-date browser (Chrome, Safari, or Firefox).
- To run the apps on their smartphone, students should download Expo at https://expo.io/
- Read through teacher notes in this document. Download notes to have exercise solutions ready.

## During the Hour of Code:

1. Direct students to **codehs.com/hoc_react**
2. Allow students to work through Hour of Code at their own pace, providing encouragement and support when needed. See tips below for handling student questions.
3. Tweet pictures or stories at @CodeHS #ReadWriteCode #HourOfCode!
4. If time allows at the end of the period, facilitate a discussion around the Hour of Code using the following guiding questions:
    - Before today, what did you think about programming or coding?
    - Did any of these ideas change during the Hour of Code?
    - What was your favorite part of the Hour of Code?
    - Did any parts of the Hour of Code challenge you? How?

## HOUR OF CODE TIPS:

If students get stuck or have questions, it is okay if you don't have the answer! Ask questions to activate their problem-solving skills such as:

- What can we try differently?
- What do you want the program to do? What are you telling the program to do?
- How can we break this problem into smaller steps?

Thank you for your dedication to Computer Science Education!

**Interested in going beyond the Hour of Code?**
**Reach out to us at hello@codehs.com.**

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# React Native Apps Teacher Notes

This activity gives you some examples on Facebook's new JavaScript library called React Native which lets you build mobile apps for any device! These examples can be run directly on students' phones using the Expo app.Find more information about Expo at https://expo.io/.

## Objective

Students will be able to ...

- Modify mobile apps made using React Native and JavaScript graphics programs
- Create their own simple mobile apps in React Native

## Link to Activity: codehs.com/hoc_apps

## Exercise Solutions

<table>
<tr><th colspan="2">Change the Text</th></tr>
<tr><td><b>Description</b></td><td>In this exercise, change the text inside the text component tags, press RUN CODE and then scan the QR code. You will see your custom text on your phone screen!</td></tr>
<tr><td><b>Motivation</b></td><td>Students practice running a React Native app and familiarizing themselves with the starter code</td></tr>
<tr><td><b>Solution</b></td><td><pre><code>import React, { Component } from 'react';
import { Text, View, StyleSheet } from 'react-native';
import { Constants } from 'expo';

export default class App extends Component {

    render() {
        return (
            &lt;View style={{ justifyContent: 'center', flex: 1 }}&gt;

                &lt;Text&gt;
                   Hello World!
                &lt;/Text&gt;

            &lt;/View&gt;
        );
    }
</code></pre></td></tr>
</table>

```
}
```

### Change the Image

| | |
|---|---|
| **Description** | In this exercise, change the image URL inside the image component tag, press RUN CODE and then scan the QR code. |
| **Motivation** | Students can add an image to their app! |

**Solution**

```
import React, { Component } from 'react';
import { Text, View, StyleSheet, Image } from 'react-native';
import { Constants } from 'expo';

export default class App extends Component {

    render() {
        return (
            <View style={{ justifyContent: 'center', flex: 1 }}>

                <Text>
                    Hello, World with Images!
                </Text>


                <Image
                    source={{ uri:
'https://media.giphy.com/media/y8Mz1yj13s3kI/giphy.gif' }}
                    style={{ height: 140, width: 200 }}
                />

            </View>
        );
    }
}
```

### Style Your Component

# React Native Apps Teacher Notes

**Description**

In this exercise, you will need to:
-Change the background color to a color listed below
-Change the text color to a color listed below
-Change the font of the text using the font list below
-Set the width of the image to 350

**Motivation**

Students practice adding style to an app built with React Native

**Solution**

```
import React, { Component } from 'react';

import { Text, View, StyleSheet, Image, Button, Alert } from 'react-native';

import { Constants } from 'expo';


export default class App extends Component {

    _handleButtonPress = () => {

        Alert.alert(

            'Button pressed!',

            'You did it!',

        );

    };


    // add a Button component below the Text component

    // edit the Button title

    // select 'RUN CODE'



    render() {

        return (

            <View style={{ backgroundColor: '#add8e6', alignItems:
```

```
'center', justifyContent: 'center', flex:1 }}>


                <Text style={{ height: 50, fontSize: 40, textAlign:
'center', color: 'blue', fontFamily: 'Futura' }}>
                    Hello, world!
                </Text>


                <Button
                    title="Press me"
                    onPress={this._handleButtonPress}
                />


            </View>
        );
    }
}
```

| Adding Linear Gradients | |
|---|---|
| **Description** | Add a linear gradient color block to your React Native app! |
| **Motivation** | Students practice adding more components to an app built with React Native |
| **Solution** | `import React, { Component } from 'react';`<br>`import { Text, View, StyleSheet, Image } from 'react-native';`<br>`import { Constants } from 'expo';`<br><br>`export default class App extends Component {` |

```
    render() {
        return (
            <View style={{ backgroundColor: 'purple', alignItems:
'center', justifyContent: 'center', flex:1 }}>

                <Text style={{ fontSize: 40, textAlign: 'center',
color: 'blue', fontFamily: 'Roboto' }}>
                    Hello, Stylish World!
                </Text>

                <Image
                    source={{ uri:
'http://d23dyxeqlo5psv.cloudfront.net/cat.gif' }}
                    style={{ height: 140, width: 350 }}
                />

            </View>
        );
    }
}
```

| Make your own app! | |
|---|---|
| **Description** | Try making any app you like! Include buttons, images, linear gradients, and more. |
| **Motivation** | Students will creatively apply what they have learned to build an app |
| **Solution** | Varies |