

RESPONSIVE WEB DESIGN

“Day by day, the number of devices, platforms, and browsers that need to work with your site grows. Responsive web design represents a fundamental shift in how we’ll build websites for the decade to come.”

– Jeffrey Veen



STATE OF TECHNOLOGY

There are thousands of device screen sizes

Can't make assumptions about devices accessing our content

Increasingly mobile

Can't make assumptions about users location and context

e.g. waiting in line at the grocery store, on the couch at home, on desktop computer at work

WHAT IS RESPONSIVE WEB DESIGN?

Responsive sites *respond* to their environment

Designs adapt to **screen size**, and **orientation**, and **use cases**

Uses flexible designs that make no assumptions about screen size

Use **breakpoints** to alter the design based on viewport width

RESPONSIVE METHODS

Three main types:

Dedicated mobile site

Barely used these days

Adaptive (fixed content widths)

Not frequently used

Fluid (percentage based widths)

Most common

RESPONSIVE METHODS: DEDICATED MOBILE SITE

Separate sites (content and design) for desktop and mobile

Each individually may utilize another responsive method

Requires detecting a specific device or browser, then routing user to appropriate site

Considered bad practice:

- Complicated SEO requirements (search engine rankings)

- Difficult/expensive to maintain multiple websites

- User agent spoofing (can be error prone, serving the wrong site to the wrong users)

RESPONSIVE METHODS: DEDICATED MOBILE SITE

The screenshot shows the desktop version of the CNN website. At the top, there is a navigation bar with the CNN logo on the left and links for 'US', 'World', 'Politics', 'Business', 'Opinion', 'Health', 'Entertainment', 'Style', 'Travel', 'Sports', and 'Videos' in the center. On the right side of the navigation bar, there are links for 'LIVE TV', 'Edition', a search icon, and a menu icon. Below the navigation bar, there is a horizontal bar with 'LIVE UPDATES: Dorian's aftermath' and 'TRENDING: World Beard Day | White Claw | NOAA | 'It Chapter Two' | Chris Duncan | Drew Brees | Great North Run'. The main content area is divided into three columns. The left column features a large article titled 'Hundreds line up at this port to evacuate' with a photo of a large crowd of people on a beach. Below the photo is a 'LIVE UPDATES' section with several links. The middle column is titled 'Today in politics' and features an article about Mike Pence's trip abroad with a photo of him. Below this are several other political news items. The right column is titled 'Top stories' and features an article about a former St. Louis Cardinals player's death with a photo of the player. Below this are several other top stories.

The screenshot shows the mobile version of the CNN website. At the top, there is a navigation bar with the CNN logo on the left and links for '9/7/2019' and 'Listen' on the right. Below the navigation bar, there is a 'Main Stories' section with a list of ten article links. The links are: 'The Bahamas' death toll is rising as 70,000 residents left homeless by Hurricane Dorian seek food and shelter', 'Here's how you can help Hurricane Dorian victims', 'Jet skiers saved 100 people trapped in flooded homes in the Bahamas', 'More tropical storms are brewing on both sides of the US', 'Former St. Louis Cardinals player dies at 38, team says', 'Eva Longoria and other celebrities write letters of support for actress Felicity Huffman ahead of her sentencing', 'Fox's Ed Henry returns after donating part of his liver to his sister', 'Italian GP practice shortened after horrific Formula 3 crash', 'Pizza Hut is making a comeback. Its NFL deal is one reason why', and 'Must-watch videos of the week'. Below the list, there are more links: 'Bound by 2 mass shootings, football rivals El Paso and Odessa unite on the field' and 'The NFL kicks off to big ratings in a big year for the league'.

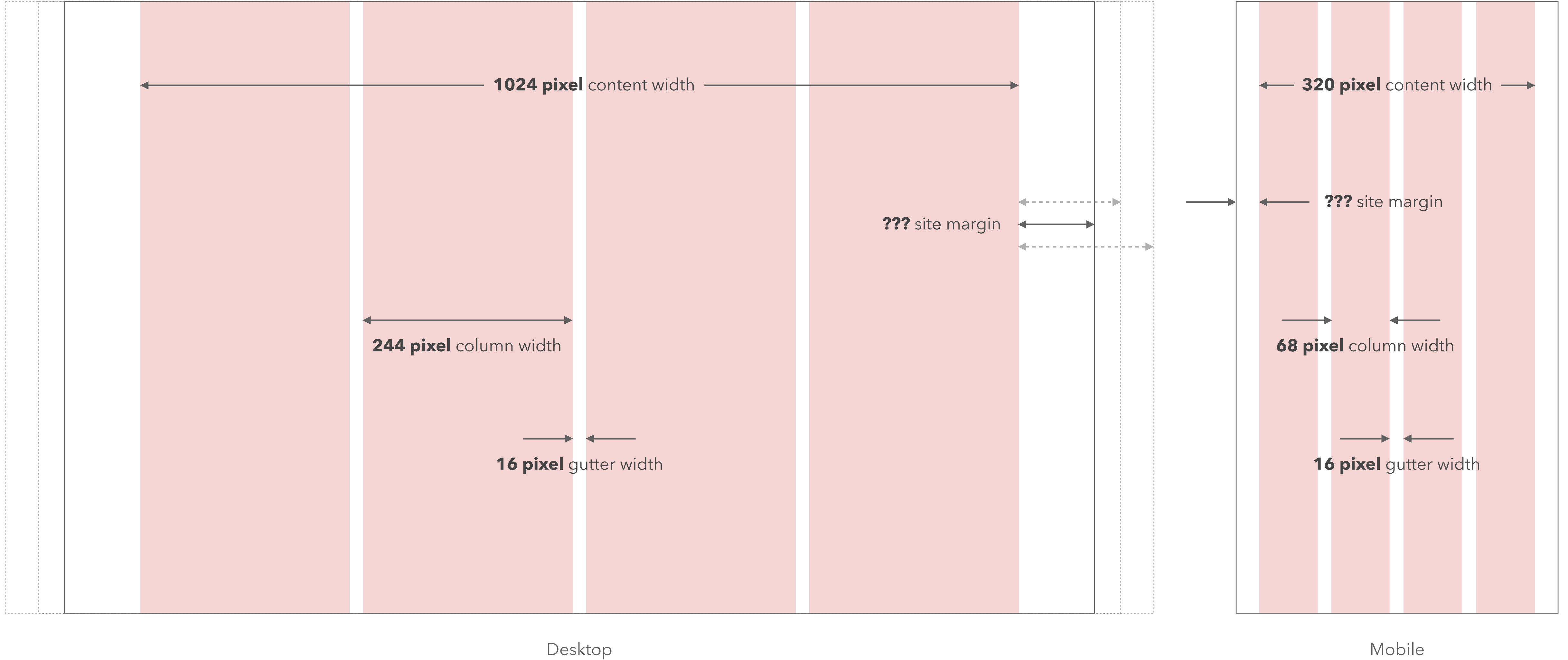
RESPONSIVE METHODS: ADAPTIVE

At each **breakpoint** there is a **fixed content width**

Easier when retrofitting an existing, non-responsive site

More control of design because you specify fixed content widths
(e.g. mobile = 320 pixels wide; tablet = 768 pixels wide; desktop = 1024 pixels wide, etc.)

RESPONSIVE METHODS: ADAPTIVE



RESPONSIVE METHODS: FLUID

Percentage based widths

Adapts to almost any screen size

Content width grows as viewport grows

Alter content and layout at specific breakpoints

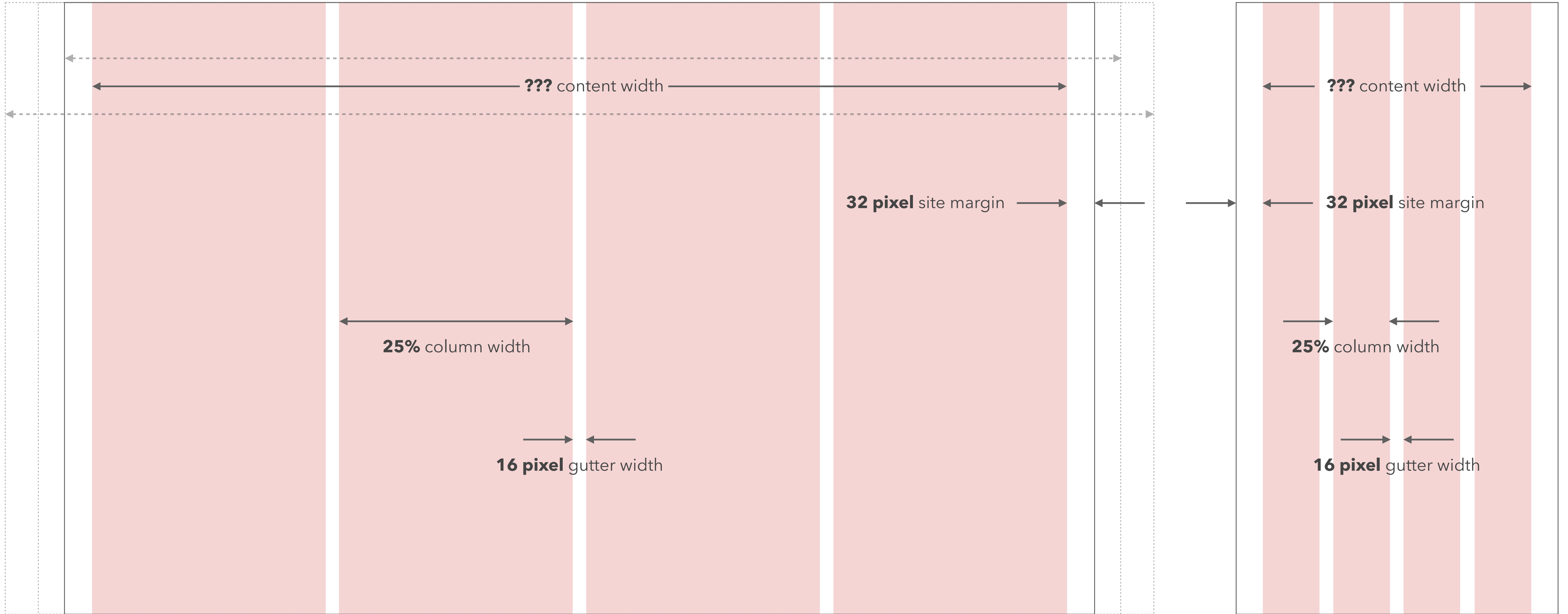
e.g. from single column on mobile to 2 column on tablet

Less control of design because content widths

are percentages of viewport width

And you, the designer, don't get to control the viewport width

RESPONSIVE METHODS: FLUID



Desktop

Mobile

WHAT ARE WE DESIGNING FOR?

Design for **content** and **situations** not screen sizes

Hierarchy, structure and **prioritization**

Properly structured content is portable to future platforms

Users in different situations require different information (e.g. a event):

- Prior to committing to attending (desktop, tablet, mobile)

- Purchasing tickets (desktop, tablet, mobile)

- Getting to the event (mobile)

- Navigating at the event (mobile)

- Looking up personal schedule at the event (tablet, mobile)

- Reviewing session videos post event (tablet, desktop)

THINGS TO CONSIDER

Simplicity

- Limited screen real estate

- User may have less focus (distractions on mobile devices)

- Information density

Speed and performance

- Slow internet connections

- Less powerful devices

MOBILE FIRST APPROACH

Constraints of a restricted screen size

Often these constraints help make tough decisions about what information is mandatory

Progressive enhancement: As screen size increases,
add additional information and complexity

The larger screen size allows for more complex designs without overwhelming users

Consider design **stress points**

At what point (viewport width) does the design break?

Introduce breakpoints at those key points.

EXAMPLES

THE WEATHER NETWORK

☰ Toronto, ON ☑

Hourly | 36 Hours | 7 Days | 14 Days

Next Hour

Sat 2 pm

20°

Feels like 21

POP 30%

Wind 14 km/h W

Wind gust 21 km/h

Sat 3 pm

21°

Feels like 23

POP 30%

Wind 15 km/h W

Wind gust 22 km/h

Sat 4 pm

22°

Feels like 23

POP 30%

Wind 16 km/h NW

Wind gust 24 km/h

Sat 5 pm

22°

POP 20%

Wind 18 km/h NW

Your weather when it really matters™
°C °F | EN | My Account | Sign in

☰ **The Weather Network**
Search for location

MY LOCATIONS: TORONTO 19°C VIEW/EDIT LOCATIONS

HOURLY | 36 HOURS | WEEKEND | 7 DAYS | 14 DAYS | MONTHLY

Toronto, ON Weather ✓ SAVED TO MY LOCATIONS

Updated on Sat, Sep 7, 1:15 PM

19°C

FEELS LIKE 19

Partly cloudy

SAT AFTERNOON
A MIX OF SUN AND CLOUDS
SAT EVENING
PARTLY CLOUDY
SAT OVERNIGHT
PARTLY CLOUDY

22°C

FEELS LIKE 23

18°C

FEELS LIKE 18

11°C

FEELS LIKE 10

SATELLITE IMAGERY

Hurricane Dorian is accelerating towards Nova Scotia

Ontario: Here's why the streak of "spoiled warm Septembers" has been interrupted

Oil spill caused by Hurricane Dorian is 'catastrophic,' environmentalists report

SEE MORE NEWS >

Hourly Forecast
SATURDAY, SEPTEMBER 7 - TUESDAY, SEPTEMBER 10

	Sat 2 pm	Sat 3 pm	Sat 4 pm	Sat 5 pm	Sat 6 pm	Sat 7 pm
	A mix of sun and clouds	A mix of sun and clouds	Mainly sunny	Mainly sunny	Mainly sunny	Mainly sunny
	20°	21°	22°	22°	21°	20°
Feels like	21	23	23	23	22	20
POP	30%	30%	30%	20%	20%	10%
Wind (km/h)	14 w	15 w	16 nw	18 nw	17 nw	17 nw
Wind gust (km/h)	21	22	24	28	26	26

VIEW LAST 24 HOURS

Did You Know?
Pollen counts are higher in the morning on warm, dry, breezy days

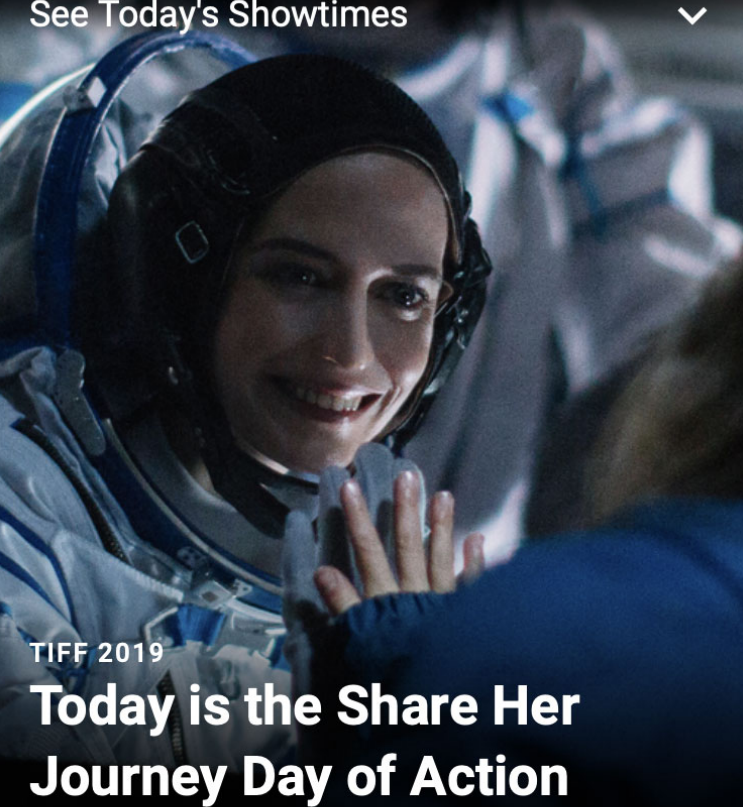
Learn More

In partnership with

EARLY SIGNS OF HURRICANE DORIAN'S IMPENDING ARRIVAL IN HALIFAX, NS


VIEW GALLERY | UPLOAD VIDEO

See Today's Showtimes ▼



TIFF 2019
Today is the Share Her Journey Day of Action

TIFF 2019: Best Bets for Saturday
We've got your weekend plans right here.

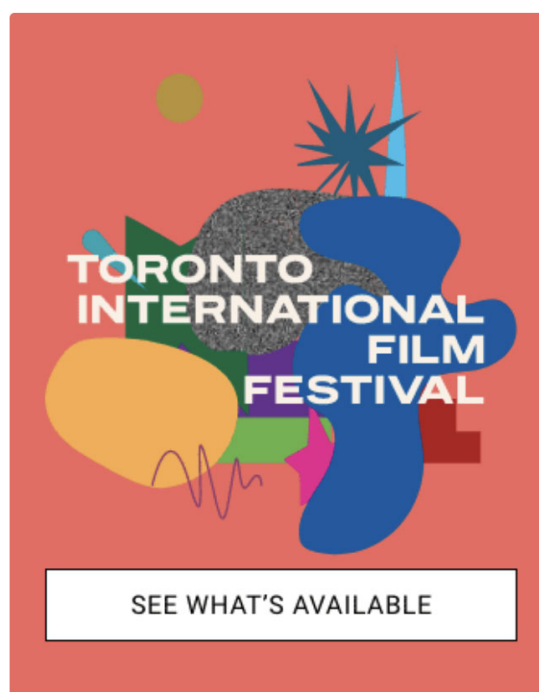


TIFF DOCS
Women Make Film: A New Road Movie Through Cinema Part 1
Mark Cousins

TIFF 2019
Available tickets

tiff 🔍 📅 🗨️ ☰




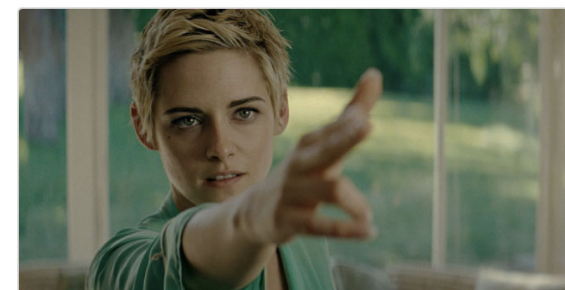
tiff Festival 2019 ▼ 🔍 📅 Support Join Buy Tickets ☰



SEE WHAT'S AVAILABLE


TIFF 2019
Today is the Share Her Journey Day of Action
Join people from all over the world by posting with #ShareHerJourney and pledging to support women in film.

TIFF 2019: Best Bets for Saturday
We've got your weekend plans right here. < >

 <p>TIFF DOCS Women Make Film: A New Road Movie Through Cinema Part 1 Mark Cousins</p>	 <p>CONTEMPORARY WORLD CINEMA Knuckle City Jahmil X.T. Qubeka</p>	 <p>DISCOVERY Hope Maria Sødahl</p>	 <p>SPECIAL PRESENTATIONS Seberg Benedict Andrews</p>
--	---	---	---

TIFF 2019
Available tickets
Lots of great films to choose from. And if you can't find what you want, we'll recommend you something cool.

TIFF 2019
Black Conflux
"Both a sensory journey through adolescence and sexual awakening and a meditation on social alienation and sexual frustration."

 **GOV.UK**

Welcome to GOV.UK

The best place to find government services and information
Simpler, clearer, faster

Search GOV.UK

Popular on GOV.UK

- [Get ready for Brexit](#)
- [Find a job](#)
- [Renew vehicle tax](#)
- [Book your theory test](#)
- [Personal tax account](#)

Get ready for Brexit

The UK will leave the EU on 31 October 2019.

[Check what you need to do](#)


Benefits
Includes eligibility, appeals, tax credits and Universal Credit

Births, deaths, marriages and care
Parenting, civil partnerships, divorce and Lasting Power of Attorney

Business and self-employed
Tools and guidance for businesses

Childcare and parenting
Includes giving birth, fostering, adopting, benefits for children, childcare and schools

Citizenship and living in the UK
Voting, community participation, life in the UK, international projects

 **GOV.UK**

Welcome to GOV.UK

The best place to find government services and information
Simpler, clearer, faster

Search GOV.UK

Popular on GOV.UK

- [Get ready for Brexit](#)
- [Find a job](#)
- [Renew vehicle tax](#)
- [Book your theory test](#)
- [Personal tax account](#)

Get ready for Brexit

The UK will leave the EU on 31 October 2019.

[Check what you need to do](#)

Benefits Includes eligibility, appeals, tax credits and Universal Credit	Disabled people Includes carers, your rights, benefits and the Equality Act	Money and tax Includes debt and Self Assessment
Births, deaths, marriages and care Parenting, civil partnerships, divorce and Lasting Power of Attorney	Driving and transport Includes vehicle tax, MOT and driving licences	Passports, travel and living abroad Includes renewing passports and travel advice by country
Business and self-employed Tools and guidance for businesses	Education and learning Includes student loans, admissions and apprenticeships	Visas and immigration Visas, asylum and sponsorship
Childcare and parenting Includes giving birth, fostering, adopting, benefits for children, childcare and schools	Employing people Includes pay, contracts and hiring	Working, jobs and pensions Includes holidays and finding a job
Citizenship and living in the UK Voting, community participation, life in the UK, international projects	Environment and countryside Includes flooding, recycling and wildlife	
Crime, justice and the law Legal processes, courts and the police	Housing and local services Owning or renting and council services	

25
Ministerial departments

405

The websites of all [government departments](#) and many other agencies and public bodies have been merged into GOV.UK.

Here you can see all [news and communications](#), [statistics](#) and [consultations](#).

QUESTIONS?